A

ROUTING RECORD

DATE	FROM	TO	ACTION
~~4/8/07~~	~~MB05~~	~~PV01~~	~~Class I~~
9-3-08	CT01	GR01	Rule 1110.2 ECF (Change of Cond) HL
9-4-08	GR01		I Accept C/C (ECF).
01-29-09	GR01	AD01	PO C/C for ECF
3-31-09	GR01	AD01	Revised
3-31-09	AD01	CT01	EPA-Review
5-26-09	AD01	CT01	PIO Approved (TV) HL

REFERENCE TO OTHER APPLICATIONS INCLUDING VARIANCES

495837

G2957

APPL # 486793
I. D. # 17301

ORANGE COUNTY SANITATION DISTRICT
10844 ELLIS AVE
FOUNTAIN VALLEY
ICE

Ident.

Date: 08/12/08

3

ORANGE COUNTY SANITATION DISTRICT
ICE

AP486793
ID 17301

South Coast Air Quality Management District

Form 400-A

Application For Permit To Construct and Permit To Operate

Mail Application To:
P.O. Box 4944
Diamond Bar, CA 91765

Tel: (909) 396-3385
www.aqmd.gov

Section A: Operator Information

1. **Business Name of Operator To Appear On The Permit:** Orange County Sanitation District

2. **Valid AQMD Facility ID (Available on Permit or Invoice issued by AQMD):** 017301

3. **Owner's Business Name (only if different from Business Name of Operator):**

Section B: Equipment Location

4. **Equipment Location Address:**
For equipment operated at various locations in AQMD's jurisdiction, provide address of initial site

10844 Ellis Avenue
Street Address

Fountain Valley, CA, 92708 - 7018
City, State, Zip Code

County: ○ Los Angeles ◉ Orange ○ San Bernardino ○ Riverside

Contact Name: Vlad Kogan

Contact Title: Senior Scientist Phone: (714) 593-7085

Fax: (714) 962-8379 E-Mail: vkogan@ocsd.com

Section C: Permit Mailing Address

5. **Permit and Correspondence Information:**
[X] Check here if same as equipment location address

Street Address

City State Zip Code

Contact Name:

Contact Title: Phone:

Fax: E-Mail:

Section D: Application Type

The facility is in ○ RECLAIM ○ Title V ○ RECLAIM & Title V Program (please check if applicable)

6. **Reason for Submitting Application (Select only ONE):**

- ○ New Construction (Permit to Construct)
- ○ Equipment Operating Without A Permit or Expired Permit*
- ○ Administrative Change
- ○ Equipment On-Site But Not Constructed or Operational
- ○ Title V Application (Initial, Revisions, Modifications, etc.)
- ○ Compliance Plan
- ○ Facility Permit Amendment
- ○ Registration/Certification
- ○ Streamlined Standard Permit

- ○ Permitted Equipment Altered/ Modified Without Permit Approval*
- ○ Proposed Alteration/Modification to Permitted Equipment
- ◉ Change of Condition For Permit To Operate (60)
- ○ Change of Condition For Permit To Construct
- ○ Change of Location—Moving to New Site

Existing Or Previous Permit/Application Number:
(If you checked any of the items in this column, you MUST provide a existing Permit/ Application Number)

F96012 A/N 414648

G1039 / 492036 ✓

* A Higher Permit Processing Fee applies to those items with an asterisk (Rule 301 (c) (1) (D)

7. **Estimated Start Date of Operation/Construction (MM/DD/YYYY):** 08/01/2008

8. **Description of Equipment:**
Internal Combustion Engine (CG1-FV), Cooper Bessemer, Spark Ignition, Four Stroke with Modified Turbocharged-Intercooled V-12 Type, Model No. LSVB-12-SGC, 3471 HP, Natural Gas and/or Digester Gas Fired, Driving a 2500 KW Electric Generator

9. **Is this equipment portable AND will it be operated at different locations within AQMD's jurisdiction?** ◉ No ○ Yes

10. **For Identical equipment, how many additional applications are being submitted with this application?** (Form 400-A required for each) 2

11. **Are you a Small Business as per AQMD's Rule 102 definition?** (10 employees or less and total gross receipts are $500,000 or less, or a not-for-profit training center?) ◉ No ○ Yes

12. **Has a Notice of Violation (NOV) or a Notice To Comply (NC) been issued for this equipment?** ◉ No ○ Yes If yes, provide NOV/NC #:

Section E: Facility Business Information

13. **What type of business is being conducted at this equipment location?** Municipal Wastewater Treatment

14. **What is your businesses primary NAICS Code** (North American Industrial Classification System)? 221320

15. **Are there other facilities in the SCAQMD jurisdiction operated by the same operator?** ○ No ◉ Yes

16. **Are there any schools (K-12) within a 1000-ft. radius of the equipment physical location?** ◉ No ○ Yes

Section F: Authorization/Signature

I hereby certify that all information contained herein and information submitted with this application is true and correct.

17. **Signature of Responsible Official:** [signature]

18. **Title:** Manager, ECRA

19. **Print Name:** Mike D. Moore

20. **Date:** 7/30/08

.08 AUG 15 ... Check List
- [ ] Form(s) signed and dated by authorized official
- [ ] Supplemental Equipment Form (400-E-XX or 400-E-GEN)
- [ ] CEQA Form (400-CEQA) attached
- [ ] Payment for permit processing fee attached

Your application will be rejected if any of the above items are missing.

AQMD USE ONLY	APPLICATION/TRACKING # 486793	TYPE (B) D	EQUIPMENT CATEGORY CODE:	FEE SCHEDULE: D $1504.09	VALIDATION 8/12/08
ENG. (A) R DATE 9-4-08 GCR	ENG. A R DATE	CLASS (I) III IV	ASSIGNMENT Unit A Engineer	CHECK/MONEY ORDER # 1000013220	AMOUNT $ 1027.06	Tracking #

(72708)

Ident. Eq.

5/5

South Coast Air Quality Management District

Form 400-A

Application For Permit To Construct and Permit To Operate

Mail Application To:
P.O. Box 4944
Diamond Bar, CA 91765

Tel: (909) 396-3385
www.aqmd.gov

Section A: Operator Information

1. Business Name of Operator To Appear On The Permit:
Orange County Sanitation District

2. Valid AQMD Facility ID (Available on Permit or Invoice issued by AQMD): 017301

3. Owner's Business Name (only if different from Business Name of Operator):

Section B: Equipment Location

4. Equipment Location Address:
For equipment operated at various locations in AQMD's jurisdiction, provide address of initial site

10844 Ellis Avenue
Street Address

Fountain Valley CA, 92708 - 7018
City State Zip Code

County: ○ Los Angeles ◉ Orange ○ San Bernardino ○ Riverside

Contact Name: Vlad Kogan

Contact Title: Senior Scientist Phone: (714) 593-7085

Fax: (714) 962-8379 E-Mail: vkogan@ocsd.com

Section C: Permit Mailing Address

5. Permit and Correspondence Information:

☒ Check here if same as equipment location address

Street Address

City State Zip Code

Contact Name:

Contact Title: Phone:

Fax: E-Mail:

Section D: Application Type

The facility is in ○ RECLAIM ○ Title V ○ RECLAIM & Title V Program (please check if applicable)

6. Reason for Submitting Application (Select only ONE):

- ○ New Construction (Permit to Construct)
- ○ Equipment Operating Without A Permit or Expired Permit*
- ○ Administrative Change
- ○ Equipment On-Site But Not *Constructed or Operational*
- ○ Title V Application (Initial, Revisions, Modifications, etc.)
- ○ Compliance Plan
- ○ Facility Permit Amendment
- ○ Registration/Certification
- ○ Streamlined Standard Permit
- ○ Permitted Equipment Altered/ Modified Without Permit Approval*
- ○ Proposed Alteration/Modification to Permitted Equipment
- ◉ Change of Condition For Permit To Operate
- ○ Change of Condition For Permit To Construct
- ○ Change of Location—Moving to New Site

Existing Or Previous Permit/Application Number:
(If you checked any of the items in this column, you MUST provide a existing Permit/ Application Number)
F96012

* A Higher Permit Processing Fee applies to those items with an asterisk (Rule 301 (c) (1) (D)

7. Estimated Start Date of Operation/Construction (MM/DD/YYYY): 08/01/2008

8. Description of Equipment:
Internal Combustion Engine (CG1-FV), Cooper Bessemer,Spark Ignition, Four Stroke with Modified Turbocharged-Intercooled V-12 Type, Model No. LSVB-12-SGC, 3471 HP, Natural Gas and/or Digester Gas Fired, Driving a 2500 KW Electric Generator

9. Is this equipment portable AND will it be operated at different locations within AQMD's jurisdiction? ◉ No ○ Yes

10. For Identical equipment, how many additional applications are being submitted with this application? (Form 400-A required for each) 2

11. Are you a Small Business as per AQMD's Rule 102 definition? (10 employees or less and total gross receipts are $500,000 or less, or a not-for-profit training center?) ◉ No ○ Yes

12. Has a Notice of Violation (NOV) or a Notice To Comply (NC) been issued for this equipment?
◉ No ○ Yes If yes, provide NOV/NC #:

Section E: Facility Business Information

13. What type of business is being conducted at this equipment location?
Municipal Wastewater Treatment

14. What is your businesses primary NAICS Code (North American Industrial Classification System)? 221320

15. Are there other facilities in the SCAQMD jurisdiction operated by the same operator? ○ No ◉ Yes

16. Are there any schools (K-12) within a 1000-ft. radius of the equipment physical location? ◉ No ○ Yes

Section F: Authorization/Signature

I hereby certify that all information contained herein and information submitted with this application is true and correct.

17. Signature of Responsible Official:
Michael D. Moore

18. Title:
Manager, ECRA

19. Print Name:
Mike D. Moore

20. Date:
7/30/08

Check List
- ☐ Form(s) signed and dated by authorized official
- ☐ Supplemental Equipment Form (400-E-XX or 400-E-GEN)
- ☐ CEQA Form (400-CEQA) attached
- ☐ Payment for permit processing fee attached

Your application will be rejected if any of the above items are missing.

AQMD USE ONLY	APPLICATION/TRACKING #	TYPE B C D	EQUIPMENT CATEGORY CODE:	FEE SCHEDULE: $	VALIDATION
ENG. A R DATE	ENG. A R DATE	CLASS I III IV	ASSIGNMENT Unit Engineer	CHECK/MONEY ORDER #	AMOUNT $	Tracking #

South Coast Air Quality Management District

Form 400-CEQA
California Environmental Quality Act (CEQA) Applicability

Mail Application To:
P.O. Box 4944
Diamond Bar, CA 91765
Tel: (909) 396-3385
www.aqmd.gov

The SCAQMD is required by state law, the California Environmental Quality Act (CEQA), to review discretionary permit project applications for potential air quality and other environmental impacts. This form is a screening tool to assist the SCAQMD in clarifying whether or not the project[1] has the potential to generate significant adverse environmental impacts that might require preparation of a CEQA document [CEQA Guidelines §15060(a)].[2] Refer to the attached instructions for guidance in completing this form.[3] For each Form 400-A application, also complete and submit one Form 400-CEQA. If submitting multiple Form 400-A applications for the same project at the same time, only one 400-CEQA form is necessary for the entire project. If you need assistance completing this form, contact Lori Inga at (909) 396-3109.

FACILITY INFORMATION

Business Name of Operator to Appear on the Permit:	Facility ID (6-Digit):
Orange County Sanitation District	017301

Project Description:

Change of condition for Permit to Operate to incorporate ECF-adjusted emission limits per requirements of SCAQMD Rule 1110.2 as amended on February 1, 2008

REVIEW FOR EXEMPTION FROM FURTHER CEQA ACTION

Check "Yes" or "No" as applicable

	Yes	No	Is this application for:
A.	○	◉	**A CEQA and/or NEPA document previously or currently prepared that specifically evaluates this project?** If yes, a permit cannot be issued until a Final CEQA document and Notice of Determination is submitted.
B.	○	◉	**A request for a change of permittee only (without equipment modifications)?**
C.	○	◉	**Equipment certification or equipment registration** (qualifies for Rule 222)?
D.	○	◉	**A functionally identical permit unit replacement with no increase in rating or emissions?**
E.	○	◉	**A change of daily VOC permit limit to a monthly VOC permit limit?**
F.	○	◉	**Equipment damaged as a result of a disaster during state of emergency?**
G.	○	◉	**A Title V** (i.e., Regulation XXX) **permit renewal (without equipment modifications)?**
H.	○	◉	**A Title V administrative permit revision?**
I.	○	◉	**The conversion of an existing permit into an initial Title V permit?**

If **"Yes"** is checked for any question above, your application does not require additional evaluation for CEQA applicability. Skip to page 2, "SIGNATURES" and sign and date this form.

REVIEW OF IMPACTS WHICH MAY TRIGGER CEQA

Complete Sections I-VI by checking "Yes" or "No" as applicable. To avoid delays in processing your application(s), explain all "Yes" responses on a separate sheet and attach it to this form.

	Yes	No	Section I – General
1.	○	◉	**Has this project generated any known public controversy regarding potential adverse impacts that may be generated by the project?** Controversy may be construed as concerns raised by local groups at public meetings; adverse media attention such as negative articles in newspapers or other periodical publications, local news programs, environmental justice issues, etc.
2.	○	◉	**Is this project part of a larger project?**
			Section II – Air Quality
3.	○	◉	**Will there be any demolition, excavating, and/or grading construction activities that encompass an area exceeding 20,000 square feet?**
4.	○	◉	**Does this project include the open outdoor storage of dry bulk solid materials that could generate dust?** If Yes, include a plot plan with the application package.

[1] A "project" means the whole of an action which has a potential for resulting in physical change to the environment, including construction activities, clearing or grading of land, improvements to existing structures, and activities or equipment involving the issuance of a permit. For example, a project might include installation of a new, or modification of an existing internal combustion engine, dry-cleaning facility, boiler, gas turbine, spray coating booth, solvent cleaning tank, etc.

[2] To download the CEQA guidelines, visit http://ceres.ca.gov/env_law/state.htm).

[3] To download this form and the instructions, visit http://www.aqmd.gov/ceqa or http://www.aqmd.gov/permit

	Yes	No	
5.	○	◉	**Would this project result in noticeable off-site odors from activities that may not be subject to SCAQMD permit requirements?** For example, compost materials or other types of greenwaste (i.e., lawn clippings, tree trimmings, etc.) have the potential to generate odor complaints subject to Rule 402 – Nuisance.
6.	○	◉	**Does this project cause an increase of emissions from marine vessels, trains and/or airplanes?**
7.	○	◉	**Will the proposed project increase the QUANTITY of hazardous materials stored aboveground onsite or transported by mobile vehicle to or from the site by greater than or equal to the amounts associated with each compound on the attached Table 1?[4]**
			Section III – Water Resources
8.	○	◉	**Will the project increase demand for water at the facility by more than 5,000,000 gallons per day?** The following examples identify some, but not all, types of projects that may result in a "yes" answer to this question: 1) projects that generate steam; 2) projects that use water as part of the air pollution control equipment; 3) projects that require water as part of the production process; 4) projects that require new or expansion of existing sewage treatment facilities; 5) projects where water demand exceeds the capacity of the local water purveyor to supply sufficient water for the project; and 6) projects that require new or expansion of existing water supply facilities.
9.	○	◉	**Will the project require construction of new water conveyance infrastructure?** Examples of such projects are when water demands exceed the capacity of the local water purveyor to supply sufficient water for the project, or require new or modified sewage treatment facilities such that the project requires new water lines, sewage lines, sewage hook-ups, etc.
			Section IV – Transportation/Circulation
10.			**Will the project result in** (Check all that apply)**:**
	○	◉	**a. the need for more than 350 new employees?**
	○	◉	**b. an increase in heavy-duty transport truck traffic to and/or from the facility by more than 350 truck round-trips per day?**
	○	◉	**c. increase customer traffic by more than 700 visits per day?**
			Section V – Noise
11.	○	◉	**Will the project include equipment that will generate noise GREATER THAN 90 decibels (dB) at the property line?**
			Section VI – Public Services
12.			**Will the project create a permanent need for new or additional public services in any of the following areas** (Check all that apply)**:**
	○	◉	**a. Solid waste disposal?** Check "No" if the projected potential amount of wastes generated by the project is less than five tons per day.
	○	◉	**b. Hazardous waste disposal?** Check "No" if the projected potential amount of hazardous wastes generated by the project is less than 42 cubic yards per day (or equivalent in pounds).

"REMINDER: For each "Yes" checked in the sections above, attach all pertinent information including but not limited to estimated quantities, volumes, weights, etc."

SIGNATURES

I HEREBY CERTIFY THAT ALL INFORMATION CONTAINED HEREIN AND INFORMATION SUBMITTED WITH THIS APPLICATION IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE. I UNDERSTAND THAT THIS FORM IS A SCREENING TOOL AND THAT THE SCAQMD RESERVES THE RIGHT TO CONSIDER OTHER PERTINENT INFORMATION IN DETERMINING CEQA APPLICABILITY.

SIGNATURE OF RESPONSIBLE OFFICIAL OF FIRM:	TITLE OF RESPONSIBLE OFFICIAL OF FIRM:	
Mike D. Moore	Manager, ECRA	
TYPE OR PRINT NAME OF RESPONSIBLE OFFICIAL OF FIRM:	RESPONSIBLE OFFICIAL'S TELEPHONE NUMBER:	DATE Signed:
Mike D. Moore	(714) 5937-450	7/30/08
SIGNATURE OF PREPARER, IF PREPARED BY PERSON OTHER THAN RESPONSIBLE OFFICIAL OF FIRM:	TITLE OF PREPARER:	
V. Kogan	Senior Scientist	
TYPE OR PRINT NAME OF PREPARER:	PREPARER'S TELEPHONE NUMBER:	DATE Signed:
Vlad Kogan	(714) 5937-085	7/30/08

THIS CONCLUDES FORM 400-CEQA. INCLUDE THIS FORM AND THE ATTACHMENTS WITH FORM 400-A.

[4] Table 1 – Regulated Substances List and Threshold Quantities for Accidental Release Prevention can be found in the Instructions for Form 400-CEQA.

SCAQ[redacted] PERMIT PROCESSING SYSTEM[redacted]PPS)

FEE DATA - SUMMARY SHEET

Application No :	486793		IRS/SS No:
Previous Application No:	492036		Previous Permit No: G1039

Company Name :	ORANGE COUNTY SANITATION DISTRICT		Facility ID: 17301
Equipment Street:	10844 ELLISAVE , FOUNTAIN VALLEY CA 92708		
Equipment Desc :	*I C E (>500 HP) NAT & DIGESTER GAS*		
Equipment Type :	BASIC		Fee Charged by: B-CAT
B-CAT NO. :	056057	C-CAT NO: 00	Fee Schedule: D
Facility Zone :	18	Deemed Compl. Date: 9/4/2008	Public Notice: NO

Evaluation Type :	CHANGE OF CONDITIONS, (PO)		Small Business: ☐
Disposition :	Approve PO, Recommended by Engineer		Higher Fees for Failing to Obtain a Permit: ☐
Lead Appl. No :	486760		Identical Permit Unit: ☑

Air quality Analysis			$0.00	Filing Fee Paid:	$0.00
E.I.R			$0.00	Permit Processing Fee Paid:	$1,504.09
Health Risk Assessment			$0.00	Permit Processing Fee Calculated*:	$1,504.09
Significant Project			$0.00	Permit Processing Fee Adjustment:	$0.00
Expedited Processing	Hours:	0.00	$0.00		
Source Test Review	Hours:	0.00	$0.00		
Time & Material	Hours:	0.00	$0.00		
				Total Additional Fee:	$0.00
				Additional Charge:	$0.00

COMMENTS: IDENTICAL EQUIP. C/C FOR ECF CORRECTION, R1110.2.

RECOMMENDED BY: GAURANG RAWAL DATE: 01/16/2009

REVIEWED BY: CDT DATE: 5/26/09

* ADJUSTED FOR SMALL BUSINESS, IDENTICAL EQUIPMENT AND P/O NO P/C PENALTY

SCAQMD PERMIT PROCESSING SYSTEM (PPS)

AEIS DATA SHEET

Company Name : ORANGE COUNTY SANITATION DISTRICT Facility ID : 17301

Equipment Address : 10844 ELLIS AVE
FOUNTAIN VALLEY CA 92708

Application Number : 486793 Equipment B-Cat : 056057

Estimated Completion Date : 01/16/09 Equipment C-Cat :

Equipment Type : Basic

Equipment Description : I C E (>500 HP) NAT & DIGESTER GAS

	Emissions	
Emittants	R1 LB/HR	R2 LB/HR
CO	18.35	18.35
NOX	7.67	7.67
PM10	0.75	0.75
ROG	5.75	5.75
SOX	0.75	0.75

Applicable Rules

1110.2	02/01/2008	Emissions from Gaseous-and Liquid-fueled Engines
401	11/09/2001	Visible Emissions
402	05/07/1976	Nuisance

	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Daily Start Times :	00:00	00:00	00:00	00:00	00:00	00:00	00:00
Daily Stop Times :	24:00	24:00	24:00	24:00	24:00	24:00	24:00

User's Initials : GR01 Date: 01/16/09 Supervisor's Name : CDT Review Date : 5/26/09

NSR DATA SUMMARY SHEET

Application No: 486793
Application Type: Change of Conditions
Application Status: PENDAPPRV
Previous Apps,Dev,Permit #: 492036, 0 - ICE-PPS, NONE

Company Name: ORANGE COUNTY SANITATION DISTRICT
Company ID: 17301
Address: 10844 ELLIS AVE,FOUNTAIN VALLEY, CA 92708
RECLAIM: NO
RECLAIM Zone: 01
Air Basin: SC
Zone: 18
Title V: YES

Device ID: 0 - ICE-PPS
Estimated Completion Date: 12-30-2008
Heat Input Capacity: 0 Million BTU/hr
Priority Reserve: NONE - No Priority Access Requested
Recommended Disposition: 31 - PERMIT TO OPERATE GRANTED
PR Expiration:
School Within 1000 Feet: NO
Operating Weeks Per Year: 52
Operating Days Per Week: 7
Monday Operating Hours: 00:00 to 24:00
Tuesday Operating Hours: 00:00 to 24:00
Wednesday Operating Hours: 00:00 to 24:00
Thursday Operating Hours: 00:00 to 24:00
Friday Operating Hours: 00:00 to 24:00
Saturday Operating Hours: 00:00 to 24:00
Sunday Operating Hours: 00:00 to 24:00

Emittant: CO
BACT:
Cost Effectiveness: NO
Source Type: MAJOR
Emis Increase: 0
Modeling: N/A
Public Notice: N/A
CONTROLLED EMISSION
Max Hourly: 18.35 lbs/hr
Max Daily: 440.4 lbs/day
UNCONTROLLED EMISSION
Max Hourly: 18.35 lbs/hr
Max Daily: 440.4 lbs/day
CURRENT EMISSION
BACT 30 days Avg: 440 lbs/day
Annual Emission: 160305.6 lbs/yr
District Exemption: None

Emittant: NOX
BACT:
Cost Effectiveness: NO
Source Type: MAJOR
Emis Increase: 0
Modeling: N/A
Public Notice: N/A
CONTROLLED EMISSION
Max Hourly: 7.67 lbs/hr
Max Daily: 184.08 lbs/day
UNCONTROLLED EMISSION
Max Hourly: 7.67 lbs/hr
Max Daily: 184.08 lbs/day
CURRENT EMISSION
BACT 30 days Avg: 187 lbs/day
Annual Emission: 67005.12 lbs/yr
District Exemption: None

Emittant: PM10
BACT:
Cost Effectiveness: NO
Source Type: MINOR
Emis Increase: 0
Modeling: N/A
Public Notice: N/A
CONTROLLED EMISSION
Max Hourly: 0.75 lbs/hr
Max Daily: 18 lbs/day
UNCONTROLLED EMISSION
Max Hourly: 0.75 lbs/hr
Max Daily: 18 lbs/day
CURRENT EMISSION
BACT 30 days Avg: 18 lbs/day
Annual Emission: 6552 lbs/yr
District Exemption: None

Emittant: ROG
BACT:
Cost Effectiveness: NO
Source Type: MINOR
Emis Increase: 0
Modeling: N/A
Public Notice: N/A
CONTROLLED EMISSION
Max Hourly: 5.75 lbs/hr
Max Daily: 138 lbs/day
UNCONTROLLED EMISSION
Max Hourly: 5.75 lbs/hr
Max Daily: 138 lbs/day
CURRENT EMISSION
BACT 30 days Avg: 140 lbs/day
Annual Emission: 50232 lbs/yr
District Exemption: None

Emittant: SOX
BACT:
Cost Effectiveness: NO
Source Type: MINOR
Emis Increase: 0
Modeling: N/A
Public Notice: N/A
CONTROLLED EMISSION
Max Hourly: 0.75 lbs/hr
Max Daily: 18 lbs/day
UNCONTROLLED EMISSION
Max Hourly: 0.75 lbs/hr
Max Daily: 18 lbs/day
CURRENT EMISSION
BACT 30 days Avg: 18 lbs/day
Annual Emission: 6552 lbs/yr
District Exemption: None

SUPERVISOR'S APPROVAL: CDT SUPERVISOR'S REVIEW DATE: 3/26/09

Processed By: gaurangr 1/29/2009 3:38:38 PM

FACILITY PERMIT TO OPERATE
ORANGE COUNTY SANITATION DISTRICT

PERMIT TO OPERATE

Permit No. G2957
A/N 486793

Equipment Description:

RESOURCE RECOVERY SYSTEM NO. 1 CONSISTING OF:

INTERNAL COMBUSTION ENGINE (CG1-FV), COOPER BESSMER, SPARK IGNITION, FOUR STROKE, WITH A MODIFIED TURBOCHARGED-INTERCOOLED V-12 TYPE, MODEL NO. LSVB-12-SGC, 3471HP, NATURAL GAS AND/OR DIGESTER GAS FIRED, DRIVING A 2500 KW ELECTRIC GENERATOR, WITH AN EXHAUST HEAT RECOVERY STEAM GENERATOR, 5;008,500 BTU/HR CAPACITY, UNFIRED.

Conditions:

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
[RULE 204]

2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]

3. THIS EQUIPMENT SHALL BE OPERATED BY PERSONNEL PROPERLY TRAINED IN ITS OPERATION.
[RULE 204]

4. THIS ENGINE SHALL HAVE AN OPERATIONAL NON-RESETTABLE TOTALIZING TIME METER TO DETERMINE THE ENGINE ELAPSED OPERATING TIME FOR EACH FUEL BLEND BURNED.
[RULE 1110.2]

5. A FLOW INDICATING AND RECORDING DEVICE SHALL BE INSTALLED IN THE FUEL GAS, OR FUEL BLEND, SUPPLY LINE TO THE ENGINE TO MEASURE AND RECORD THE QUANTITY OF EACH FUEL GAS (IN SCFM) BURNED.
[RULE 204]

6. SAMPLING PORT SHALL BE INSTALLED FOR THE INLET GAS LINE TO THE ENGINE TO ALLOW THE COLLECTION OF A FUEL GAS OR FUEL BLEND SAMPLES.
[RULE 204]

7. MONTHLY READINGS OF THE BTU CONTENT OF FUEL GAS (BTU/SCF) AT THE COMBINED INLET TO THE CGS ENGINES SHALL BE TAKEN USING AN INSTRUMENT APPROVED BY THE SCAQMD. ALL RESULTS SHALL BE RECORDED.
[RULE 204]

8. ALL RECORDING DEVICES SHALL BE SYNCHRONIZED WITH RESPECT TO THE TIME OF THE DAY.
[RULE 204]

FACILITY PERMIT TO OPERATE
ORANGE COUNTY SANITATION DISTRICT

9. THE TOTAL HEAT INPUT OF GASEOUS FUEL, OR FUEL BLEND, BURNED IN THIS ENGINE SHALL NOT EXCEED 28.5 MM BTU PER HOUR. A LOG SHALL BE KEPT INDICATING THE TOTAL HEATING VALUE OF FUEL GAS, OR FUEL BLEND, BURNED IN THIS ENGINE BASED ON THE RECORDED FLOW RATE (SCFM) AND THE LATEST MONTHLY BTU CONTENT READING.
[RULE 1303 (b) (1) AND 1303 (b) (2)-MODELING AND EMISSIONS OFFSET]

10. THIS EQUIPMENT SHALL BE OPERATED IN COMPLIANCE WITH RULES 218, 431.1 AND 1110.2.
[RULE 218, 431.1 AND 1110.2]

11. THIS EQUIPMENT SHALL BE OPERATED IN SUCH A MANNER THAT THE FOLLOWING EMISSION RATES ARE NOT EXCEEDED.

AIR CONTAMINANT	
CARBON MONOXIDE	590 PPMV AT 15% O2
PARTICULATES (PM10)	0.0087 GRAINS/ DSCF
ROG OR TNMHC (AS CARBON)	209 PPMV AT 15% O2

[RULE 1303 (a) (1), 1303(b) (1) AND 1303 (b) (2)-BACT, MODELING AND EMISSIONS OFFSET]

12. THE COMBINED EMISSIONS FROM THE THREE (3) CGS ENGINES, USING CALENDAR MONTHLY EMISSIONS DIVIDED BY 30, SHALL NOT EXCEED THE FOLLOWING:

AIR CONTAMINANT	LBS/DAY
CARBON MONOXIDE	1321
NITROGEN OXIDES (AS NO2)	368
PARTICULATES (PM10)	36
ROG OR TNMHC (AS CH4)	276
SULFUR DIOXIDE	36

[RULE 1303 (b) (2)-EMISSIONS OFFSET]

13. THE OPERATOR SHALL INSTALL AND MAINTAIN A CONTINUOUS EMISSION MONITORING SYSTEM (CEMS), OR AN ALTERNATIVE SYSTEM, AS APPROVED BY THE EXECUTIVE OFFICER, TO MEASURE THE ENGINE EXHAUST FOR NOx AND O2 CONCENTRATIONS ON A DRY BASIS, EXCEPT DURING SHUTDOWN FOR MAINTENANCE OF THE SYSTEM. IN ADDITION, THE CEMS SHALL CONVERT THE ACTUAL NOx TO MASS EMISSION RATES; AND RECORD THE ACTUAL AND CORRECTED ENGINE NOx CONCENTRATION AT 15% O2 AND MASS EMISSION RATES ON AN HOURLY AND DAILY BASIS.
[RULE 218, RULE 1110.2]

14. THE OPERATOR SHALL CONDUCT PERFORMANCE TESTS ANNUALLY. WRITTEN NOTICE OF THE PERFORMANCE TEST SHALL BE PROVIDED TO THE AQMD AT LEAST 7 DAYS PRIOR TO THE TEST SO THAT AN OBSERVER MAY BE PRESENT. A COMPLETE FINAL REPORT OF THE TEST (LBS/HR, PPMVD AT 15% O2, LBS/MMBTU, ETC.) SHALL BE PROVIDED TO THE AQMD WITHIN 45 DAYS AFTER TESTING. ALL TEST RUNS REQUIRED BY AQMD SHALL BE REPORTED. THE TESTS SHALL INCLUDE BUT NOT BE LIMITED TO, A TEST OF THE FUELS BURNED AND ENGINE EXHAUST FOR:

A. TOTAL NON-METHANE HYDROCARBONS (EXHAUST ONLY).
B. CARBON MONOXIDE (EXHAUST ONLY)
C. TOTAL PARTICULATE MATTER (EXHAUST ONLY).
D. OXIDES OF NITROGEN (EXHAUST ONLY).

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E. OXYGEN
F. FLOW RATE
G. MOISTURE
H. TOXIC AIR CONTAMINANTS (EXHAUST ONLY), FOR ONE ENGINE PER YEAR
I. ALDEHYDES (EXHAUST ONLY), FOR ONE ENGINE PER YEAR
J. TOTAL REDUCED SULFUR COMPOUNDS (FUEL ONLY)
K. NITROGEN AND CARBON DIOXIDE
L. BTU CONTENTS (FUEL ONLY)
M. POWER OUTPUT

[RULE 1303(b) (1) AND 1303(b) (2) - MODELING AND EMISSION OFFSET], [RULE 1110.2], [RULE 404]

15 RECORDS SHALL BE KEPT AND MAINTAINED TO PROVE COMPLIANCE WITH ALL CONDITIONS FOR THIS PERMIT. THE RECORDS SHALL BE KEPT ON FILE FOR AT LEAST FIVE YEARS AND SHALL BE MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.
[RULE 204]

Emissions And Requirements:

16. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

CO: 2000 PPMV, RULE 1110.2
NOx: 45 PPMV, RULE 1110.2 (WITH 1.25 ECF ADJUSTMENT FACTOR).
ROG: 313 PPMV, RULE 1110.2 (WITH 1.25 ECF ADJUSTMENT FACTOR).
PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS

Gaurang Rawal

From: Kogan, Vlad
Sent: Tuesday, January 13, 2009 5:19 PM
To: Gaurang Rawal
Subject: FW: CGS issues

Gaurang,

I'm sorry, but it is absolutely necessary for us to receive a positive response to my e-mail from 1/6/09. As You know, we are Title V facility right now and should report any non-compliance. Our engines often operate at 40+ ppm of NOx that is OK with the ECF (e.g. 36 ppm x 1.3=46.8). But without approved ECFs that we submitted back in July 2007 we are not sure that such calculations can be used. Still, we do not have other choice than continue operating the engines under the assumption that our ECFs are confirmed per Rule 1110.2.

The issue of operating at more than 10% natural gas is less burning at the current mode. Still, when flares were monthly tested we didn't have enough di-gas at Plant 2 and were forced to operate engines at more than 10% natural [redacted] It will happen once every 1.5 months or so. Other possibilities of violating this R1110.2 provisions are also might happen.

So we really need your response asap and even faster. If you think that Charlie/Amir should be involved, please let me know (or transfer this e-mail to them)

Please contact me if you have questions. Thanks,
VK

From: Kogan, Vladimir
Sent: Tuesday, January 06, 2009 2:41 PM
To: Gaurang Rawal
Cc: Ahn, Terry; Rothbart, Lisa
Subject: CGS issues

Gaurang,

What is a situation with our application for including ECF to our engines emissions data? We submitted the application with the testing result back in July 2008. Can we use these results for calculation the compliance with NOx emission limits (e.g. consider these limits at 43-45 ppm and not at 36 ppm)?. Another issue is a permission to run the engines at more than 10% of di-gas. We submitted the application as specified by the Rule 1110.2 almost a year ago. As you understand, we are running engines at almost 100% di-gas but during the flares testing we might not be able to run the engines at 100% di-gas for a short time. In both examples such events are very rare and short-time but being a Title V facilities we'd like to avoid such situations completely. Thanks,
VK

Vlad Kogan
Senior Scientist
Environmental Compliance Division
Orange County Sanitation District
Tel: 714-593-7085
Fax: 714-962-8379

FACILITY PERMIT TO OPERATE
ORANGE COUNTY SANITATION DISTRICT

PERMIT TO OPERATE

Permit No. TBD
A/N 486793

Equipment Description:

RESOURCE RECOVERY SYSTEM NO. 1 CONSISTING OF:

INTERNAL COMBUSTION ENGINE (CG1-FV), COOPER BESSMER, SPARK IGNITION, FOUR STROKE, WITH A MODIFIED TURBOCHARGED-INTERCOOLED V-12 TYPE, MODEL NO. LSVB-12-SGC, 3471HP, NATURAL GAS AND/OR DIGESTER GAS FIRED, DRIVING A 2500 KW ELECTRIC GENERATOR, WITH AN EXHAUST HEAT RECOVERY STEAM GENERATOR, 5,008,500 BTU/HR CAPACITY, UNFIRED.

Conditions:

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
[RULE 204]

2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]

3. THIS EQUIPMENT SHALL BE OPERATED BY PERSONNEL PROPERLY TRAINED IN ITS OPERATION.
[RULE 204]

4. THIS ENGINE SHALL HAVE AN OPERATIONAL NON-RESETTABLE TOTALIZING TIME METER TO DETERMINE THE ENGINE ELAPSED OPERATING TIME FOR EACH FUEL BLEND BURNED.
[RULE 1110.2]

5. A FLOW INDICATING AND RECORDING DEVICE SHALL BE INSTALLED IN THE FUEL GAS, OR FUEL BLEND, SUPPLY LINE TO THE ENGINE TO MEASURE AND RECORD THE QUANTITY OF EACH FUEL GAS (IN SCFM) BURNED.
[RULE 204]

6. SAMPLING PORT SHALL BE INSTALLED FOR THE INLET GAS LINE TO THE ENGINE TO ALLOW THE COLLECTION OF A FUEL GAS OR FUEL BLEND SAMPLES.
[RULE 204]

7. MONTHLY READINGS OF THE BTU CONTENT OF FUEL GAS (BTU/SCF) AT THE COMBINED INLET TO THE CGS ENGINES SHALL BE TAKEN USING AN INSTRUMENT APPROVED BY THE SCAQMD. ALL RESULTS SHALL BE RECORDED.
[RULE 204]

8. ALL RECORDING DEVICES SHALL BE SYNCHRONIZED WITH RESPECT TO THE TIME OF THE DAY.
[RULE 204]

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9. THE TOTAL HEAT INPUT OF GASEOUS FUEL, OR FUEL BLEND, BURNED IN THIS ENGINE SHALL NOT EXCEED 28.5 MM BTU PER HOUR. A LOG SHALL BE KEPT INDICATING THE TOTAL HEATING VALUE OF FUEL GAS, OR FUEL BLEND, BURNED IN THIS ENGINE BASED ON THE RECORDED FLOW RATE (SCFM) AND THE LATEST MONTHLY BTU CONTENT READING.
[RULE 1303 (b) (1) AND 1303 (b) (2)-MODELING AND EMISSIONS OFFSET]

10. THIS EQUIPMENT SHALL BE OPERATED IN COMPLIANCE WITH RULES 218, 431.1 AND 1110.2.
[RULE 218, 431.1 AND 1110.2]

11. THIS EQUIPMENT SHALL BE OPERATED IN SUCH A MANNER THAT THE FOLLOWING EMISSION RATES ARE NOT EXCEEDED.

AIR CONTAMINANT	
CARBON MONOXIDE	590 PPMV AT 15% O2
PARTICULATES (PM10)	0.0087 GRAINS/ DSCF
ROG OR TNMHC (AS CARBON)	209 PPMV AT 15% O2

[RULE 1303 (a) (1), 1303(b) (1) AND 1303 (b) (2)-BACT, MODELING AND EMISSIONS OFFSET]

12. THE COMBINED EMISSIONS FROM THE THREE (3) CGS ENGINES, USING CALENDAR MONTHLY EMISSIONS DIVIDED BY 30, SHALL NOT EXCEED THE FOLLOWING:

AIR CONTAMINANT	LBS/DAY
CARBON MONOXIDE	1321
NITROGEN OXIDES (AS NO2)	368
PARTICULATES (PM10)	36
ROG OR TNMHC (AS CH4)	276
SULFUR DIOXIDE	36

[RULE 1303 (b) (2)-EMISSIONS OFFSET]

13. THE OPERATOR SHALL INSTALL AND MAINTAIN A CONTINUOUS EMISSION MONITORING SYSTEM (CEMS), OR AN ALTERNATIVE SYSTEM, AS APPROVED BY THE EXECUTIVE OFFICER, TO MEASURE THE ENGINE EXHAUST FOR NOx AND O2 CONCENTRATIONS ON A DRY BASIS, EXCEPT DURING SHUTDOWN FOR MAINTENANCE OF THE SYSTEM. IN ADDITION, THE CEMS SHALL CONVERT THE ACTUAL NOx TO MASS EMISSION RATES; AND RECORD THE ACTUAL AND CORRECTED ENGINE NOx CONCENTRATION AT 15% O2 AND MASS EMISSION RATES ON AN HOURLY AND DAILY BASIS.
[RULE 218, RULE 1110.2]

14. THE OPERATOR SHALL CONDUCT PERFORMANCE TESTS ANNUALLY. WRITTEN NOTICE OF THE PERFORMANCE TEST SHALL BE PROVIDED TO THE AQMD AT LEAST 7 DAYS PRIOR TO THE TEST SO THAT AN OBSERVER MAY BE PRESENT. A COMPLETE FINAL REPORT OF THE TEST (LBS/HR, PPMVD AT 15% O2, LBS/MMBTU, ETC.) SHALL BE PROVIDED TO THE AQMD WITHIN 45 DAYS AFTER TESTING. ALL TEST RUNS REQUIRED BY AQMD SHALL BE REPORTED. THE TESTS SHALL INCLUDE BUT NOT BE LIMITED TO, A TEST OF THE FUELS BURNED AND ENGINE EXHAUST FOR:

A. TOTAL NON-METHANE HYDROCARBONS (EXHAUST ONLY).
B. CARBON MONOXIDE (EXHAUST ONLY)
C. TOTAL PARTICULATE MATTER (EXHAUST ONLY).
D. OXIDES OF NITROGEN (EXHAUST ONLY).

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E. OXYGEN
F. FLOW RATE
G. MOISTURE
H. TOXIC AIR CONTAMINANTS (EXHAUST ONLY), FOR ONE ENGINE PER YEAR
I. ALDEHYDES (EXHAUST ONLY), FOR ONE ENGINE PER YEAR
J. TOTAL REDUCED SULFUR COMPOUNDS (FUEL ONLY)
K. NITROGEN AND CARBON DIOXIDE
L. BTU CONTENTS (FUEL ONLY)
M. POWER OUTPUT

[RULE 1303(b) (1) AND 1303(b) (2) - MODELING AND EMISSION OFFSET], [RULE 1110.2], [RULE 404]

15 RECORDS SHALL BE KEPT AND MAINTAINED TO PROVE COMPLIANCE WITH ALL CONDITIONS FOR THIS PERMIT. THE RECORDS SHALL BE KEPT ON FILE FOR AT LEAST FIVE YEARS AND SHALL BE MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.
[RULE 204]

Emissions And Requirements:

16. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

CO: 2000 PPMV, RULE 1110.2
NOx: 45 PPMV, RULE 1110.2 (WITH 1.25 ECF ADJUSTMENT FACTOR).
ROG: 313 PPMV, RULE 1110.2 (WITH 1.25 ECF ADJUSTMENT FACTOR).
PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT	PAGES 5	PAGE 1
ENGINEERING AND COMPLIANCE DIVISION	APPL NO SEE BELOW	DATE 4/03/2009
PERMIT APPLICATION EVALUATION AND CALCULATIONS	PROCESSED BY GCR	CHECKED BY CDT

PERMIT TO OPERATE (CHANGE OF CONDITION) EVALUATION

APPLICANT'S NAME: ORANGE COUNTY SANITATION DISTRICT (OCSD)

MAILING ADDRESS: 10844 ELLIS AVENUE
FOUNTAIN VALLEY, CA 92708
ATTN.: VLAD KOGAN, SENIOR SCIENTIST

EQUIPMENT ADDRESS: WASTEWATER TREATMENT PLANT NO. 1
"SAME AS ABOVE"

FACILITY ID NO.: **017301**

EQUIPMENT DESCRIPTION:

APPLICATION NO. 486760

RESOURCE RECOVERY SYSTEM NO. 3 CONSISTING OF:

INTERNAL COMBUSTION ENGINE (CG3-FV), COOPER BESSMER, SPARK IGNITION, FOUR STROKE, WITH A MODIFIED TURBOCHARGED-INTERCOOLED V-12 TYPE, MODEL NO. LSVB-12-SGC, 3471HP, NATURAL GAS AND/OR DIGESTER GAS FIRED, DRIVING A 2500 KW ELECTRIC GENERATOR, WITH AN EXHAUST HEAT RECOVERY STEAM GENERATOR, 5,008,500 BTU/HR CAPACITY, UNFIRED.

APPLICATION NO. 486792

RESOURCE RECOVERY SYSTEM NO. 2 CONSISTING OF:

INTERNAL COMBUSTION ENGINE (CG2-FV), COOPER BESSMER, SPARK IGNITION, FOUR STROKE, WITH A MODIFIED TURBOCHARGED-INTERCOOLED V-12 TYPE, MODEL NO. LSVB-12-SGC, 3471HP, NATURAL GAS AND/OR DIGESTER GAS FIRED, DRIVING A 2500 KW ELECTRIC GENERATOR, WITH AN EXHAUST HEAT RECOVERY STEAM GENERATOR, 5,008,500 BTU/HR CAPACITY, UNFIRED.

APPLICATION NO. 486793

RESOURCE RECOVERY SYSTEM NO. 1 CONSISTING OF:

INTERNAL COMBUSTION ENGINE (CG1-FV), COOPER BESSMER, SPARK IGNITION, FOUR STROKE, WITH A MODIFIED TURBOCHARGED-INTERCOOLED V-12 TYPE, MODEL NO. LSVB-12-SGC, 3471HP, NATURAL GAS AND/OR DIGESTER GAS FIRED, DRIVING A 2500 KW ELECTRIC GENERATOR, WITH AN EXHAUST HEAT RECOVERY STEAM GENERATOR, 5,008,500 BTU/HR CAPACITY, UNFIRED.

Conditions: (A/N 486760, 486792 and 486793)

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
   [RULE 204]

2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
   [RULE 204]

3. THIS EQUIPMENT SHALL BE OPERATED BY PERSONNEL PROPERLY TRAINED IN ITS OPERATION.
   [RULE 204]

4. THIS ENGINE SHALL HAVE AN OPERATIONAL NON-RESETTABLE TOTALIZING TIME METER TO DETERMINE THE ENGINE ELAPSED OPERATING TIME FOR EACH FUEL BLEND BURNED.
   [RULE 1110.2]

5. A FLOW INDICATING AND RECORDING DEVICE SHALL BE INSTALLED IN THE FUEL GAS, OR FUEL BLEND, SUPPLY LINE TO THE ENGINE TO MEASURE AND RECORD THE QUANTITY OF EACH FUEL GAS (IN SCFM) BURNED.
   [RULE 204]

6. SAMPLING PORT SHALL BE INSTALLED FOR THE INLET GAS LINE TO THE ENGINE TO ALLOW THE COLLECTION OF A FUEL GAS OR FUEL BLEND SAMPLES.
   [RULE 204]

7. MONTHLY READINGS OF THE BTU CONTENT OF FUEL GAS (BTU/SCF) AT THE COMBINED INLET TO THE CGS ENGINES SHALL BE TAKEN USING AN INSTRUMENT APPROVED BY THE SCAQMD. ALL RESULTS SHALL BE RECORDED.
   [RULE 204]

8. ALL RECORDING DEVICES SHALL BE SYNCHRONIZED WITH RESPECT TO THE TIME OF THE DAY.
   [RULE 204]

9. THE TOTAL HEAT INPUT OF GASEOUS FUEL, OR FUEL BLEND, BURNED IN THIS ENGINE SHALL NOT EXCEED 28.5 MM BTU PER HOUR. A LOG SHALL BE KEPT INDICATING THE TOTAL HEATING VALUE OF FUEL GAS, OR FUEL BLEND, BURNED IN THIS ENGINE BASED ON THE RECORDED FLOW RATE (SCFM) AND THE LATEST MONTHLY BTU CONTENT READING.
   [RULE 1303 (b) (1) AND 1303 (b) (2)-MODELING AND EMISSIONS OFFSET]

10. THIS EQUIPMENT SHALL BE OPERATED IN COMPLIANCE WITH RULES 218, 431.1 AND 1110.2.
    [RULE 218, 431.1 AND 1110.2]

11. THIS EQUIPMENT SHALL BE OPERATED IN SUCH A MANNER THAT THE FOLLOWING EMISSION RATES ARE NOT EXCEEDED.

AIR CONTAMINANT	
CARBON MONOXIDE	590 PPMV AT 15% O2
PARTICULATES (PM10)	0.0087 GRAINS/ DSCF
ROG OR TNMHC (AS CARBON)	209 PPMV AT 15% O2

[RULE 1303 (a) (1), 1303(b) (1) AND 1303 (b) (2)-BACT, MODELING AND EMISSIONS OFFSET]

12. THE COMBINED EMISSIONS FROM THE THREE (3) CGS ENGINES, USING CALENDAR MONTHLY EMISSIONS DIVIDED BY 30, SHALL NOT EXCEED THE FOLLOWING:

AIR CONTAMINANT	LBS/DAY
CARBON MONOXIDE	1321
NITROGEN OXIDES (AS NO2)	368
PARTICULATES (PM10)	36
ROG OR TNMHC (AS CH4)	276
SULFUR DIOXIDE	36

[RULE 1303 (b) (2)-EMISSIONS OFFSET]

13. THE OPERATOR SHALL INSTALL AND MAINTAIN A CONTINUOUS EMISSION MONITORING SYSTEM (CEMS), OR AN ALTERNATIVE SYSTEM, AS APPROVED BY THE EXECUTIVE OFFICER, TO MEASURE THE ENGINE EXHAUST FOR NOx AND O2 CONCENTRATIONS ON A DRY BASIS, EXCEPT DURING SHUTDOWN FOR MAINTENANCE OF THE SYSTEM. IN ADDITION, THE CEMS SHALL CONVERT THE ACTUAL NOx TO MASS EMISSION RATES; AND RECORD THE ACTUAL AND CORRECTED ENGINE NOx CONCENTRATION AT 15% O2 AND MASS EMISSION RATES ON AN HOURLY AND DAILY BASIS.
[RULE 218, RULE 1110.2]

14. THE OPERATOR SHALL CONDUCT PERFORMANCE TESTS ANNUALLY. WRITTEN NOTICE OF THE PERFORMANCE TEST SHALL BE PROVIDED TO THE AQMD AT LEAST 7 DAYS PRIOR TO THE TEST SO THAT AN OBSERVER MAY BE PRESENT. A COMPLETE FINAL REPORT OF THE TEST (LBS/HR, PPMVD AT 15% O2, LBS/MMBTU, ETC.) SHALL BE PROVIDED TO THE AQMD WITHIN 45 DAYS AFTER TESTING. ALL TEST RUNS REQUIRED BY AQMD SHALL BE REPORTED. THE TESTS SHALL INCLUDE BUT NOT BE LIMITED TO, A TEST OF THE FUELS BURNED AND ENGINE EXHAUST FOR:

A. TOTAL NON-METHANE HYDROCARBONS (EXHAUST ONLY)
B. CARBON MONOXIDE (EXHAUST ONLY)
C. TOTAL PARTICULATE MATTER (EXHAUST ONLY).
D. OXIDES OF NITROGEN (EXHAUST ONLY).
E. OXYGEN
F. FLOW RATE
G. MOISTURE
H. TOXIC AIR CONTAMINANTS, FOR ONE ENGINE PER YEAR
I. ALDEHYDES (EXHAUST ONLY), FOR ONE ENGINE PER YEAR
J. TOTAL REDUCED SULFUR COMPOUNDS (INLET)
K. NITROGEN AND CARBON DIOXIDE

L. BTU CONTENTS (INLET)
M. POWER OUTPUT
[RULE 1303(b) (1) AND 1303(b) (2) - MODELING AND EMISSION OFFSET], [RULE 1110.2], [RULE 404]

15 RECORDS SHALL BE KEPT AND MAINTAINED TO PROVE COMPLIANCE WITH ALL CONDITIONS FOR THIS PERMIT. THE RECORDS SHALL BE KEPT ON FILE FOR AT LEAST FIVE YEARS AND SHALL BE MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.
[RULE 204]

EMISSIONS AND REQUIREMENTS:

16. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

CO: 2000 PPMV, RULE 1110.2
NOX: 45 PPMV, RULE 1110.2 (1.25 ECF ADJUSTMENT FACTOR).
ROG: 313 PPMV, RULE 1110.2 (1.25 ECF ADJUSTMENT FACTOR).
PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS

BACKGROUND:
On August 12, 2008, the above A/Ns 486760, 486792 and 486793 (identical equipment) were submitted by the Orange County sanitation District (OCSD) for change of condition for NOx and VOC emission concentrations, per Rule 1110.2 (d) (1) (C), amended February 1, 2008. Each identical equipment is part of the Central generation System (CGS), spark-ignited internal combustion engine, located at Fountain Valley, Plant No. 1.

This is a Title V facility and initial Title V facility permit was issued that became effective January 12, 2009. Application (495837) for Title V permit revision is submitted. Staff has decided to include these engines' permits under TV revision No. 1, and Rule 1110.2 I & M Plan, A/N 486759, will be addressed separately at a later date.

PROCESS DESCRIPTION:
On 12/9/2008, the following most recent permits for the above engines were granted.,

G1039 / A/N 492036 (CG1-FV)
G1040 / A/N 492038 (CG2-FV)
G1041 / A/N 492039 (CG3-FV)

To comply with Rule (d) (1) (C), Table III, Emission Correction factor (ECF) based concentrations, OCSD had conducted required source tests [Per R1110.2 (d) (1) (C) (i) and (ii)] for each engine during June and July 2008. The tests were conducted by .....as required under R1110.2 (ASME Performance Test Code PTC 17-1973) for high, medium and low load, and average values determined for NOx, VOC and ECF (see summary results tables in folder).

Average results from three different loads are summarized below,

	Units	Engine No. 1	Engine No. 2	Engine No. 3
Exhaust Flow Rate	DSCFM	8116	9771	8226
O_2	%O2	11.92	12.20	11.72
NO_x	ppmvd @ 15% O2	23.5	24.3	37.6
TNMOC	ppmvd @ 15% O2	45.5	114.8	102.4
CO (for information)	ppmvd @ 15% O2	399.3	466	385.9
Measured Q_a	Btu/Bhp-hr	7336.5	7524.3	7356.7
ECF = 9250 / Q_a		1.26	1.23	1.26

EMISSION (ppmvd at 15% O2) :

For these identical engines, average **ECF = 1.25** will be used to determine ECF based conc.emission.

NO_x = 36 x 1.25 = **45 ppmvd**

TNMOC (VOC) = 250 x 1.25 = **313 ppmvd**

CO concentration limit is kept as before as no ECF adjustment is required..

Condition No. 16 is updated for NOx and ROG con. limit with ECF = 1.25 (Rule 1110.2).

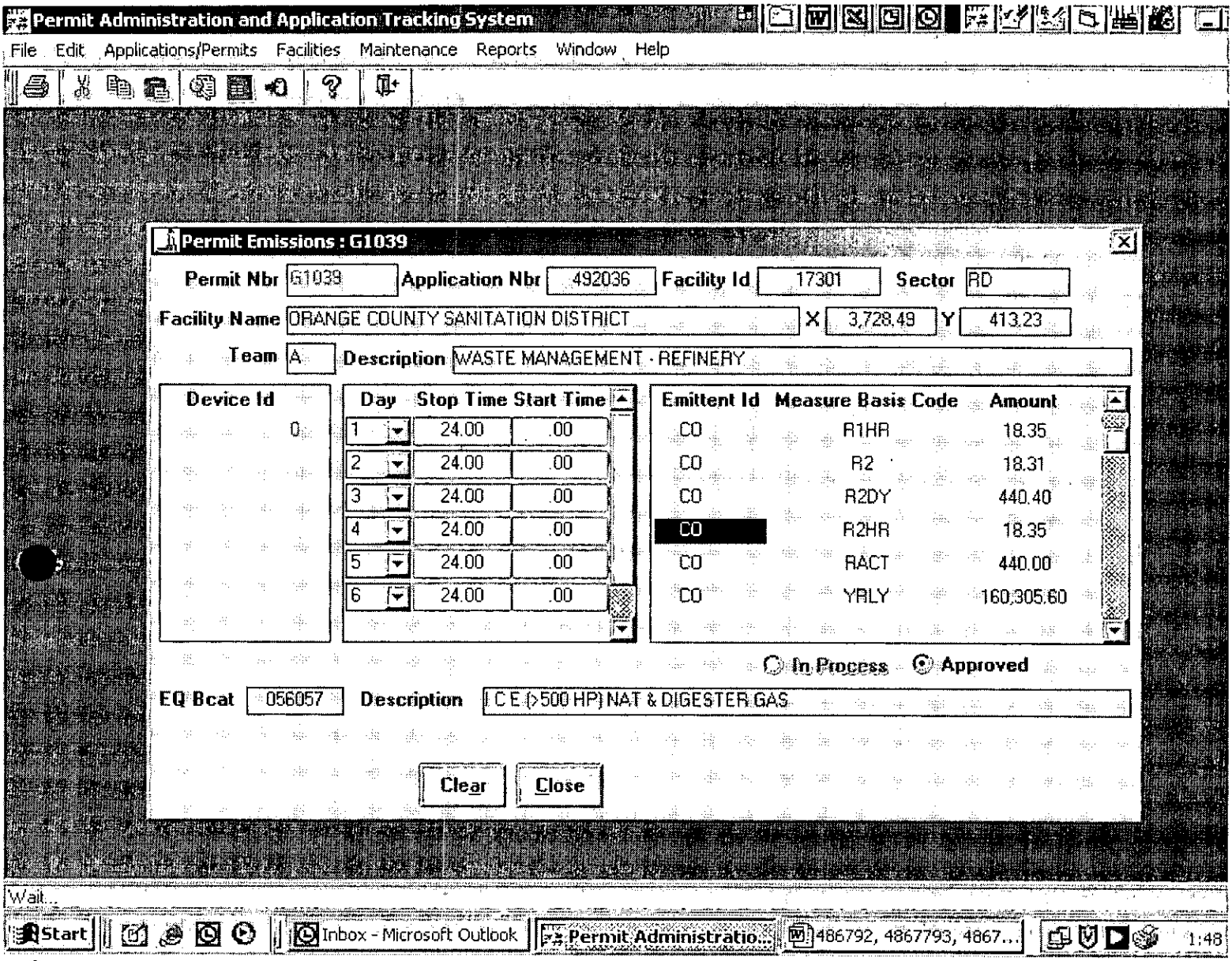
Mass emissions are kept same as under previous permit(s);
CO = 18.35 lbs/hr
NOx = 7.67 lbs/hr
PM10 = 0.75 lbs/hr
ROG = 5.75 lbs/hr
SOx = 0.75 lbs/hr

RULES EVALUATION:

Compliance with all applicable rules and regulations is expected.
NOx and VOC concentration limits are imposed, Condition No. 11, per Rule 1110.2 (d) (1) (C).

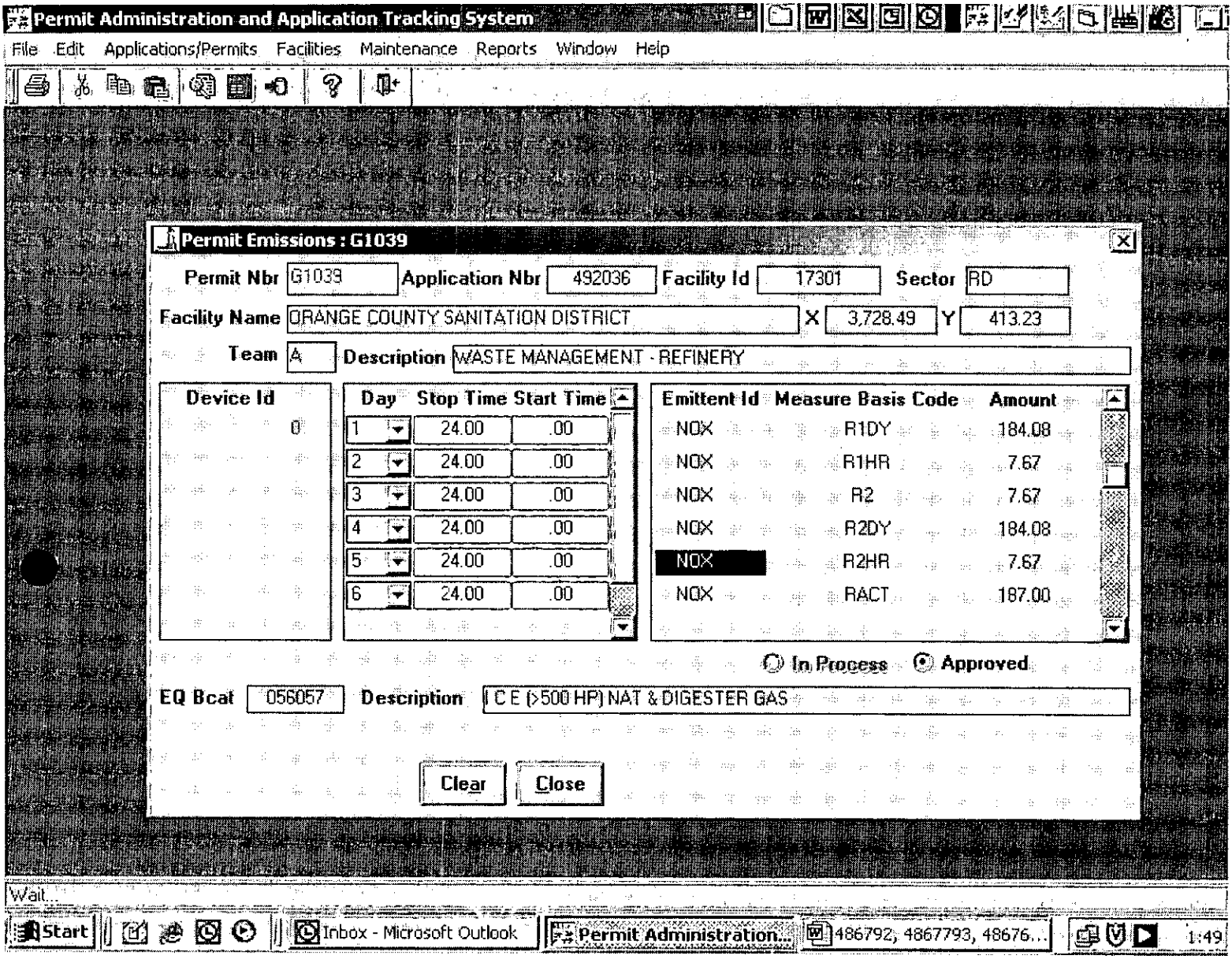
RECOMMENDATION:

Permit to operate for the proposed change of condition for each engine is recommended with above listed conditions (to be incorporated into Title V revision (No. 1) , A/N 495837.



492036
492038
492039

} Identical Equip.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Permit Nbr G1039
Application Nbr 492036
Facility Id 17301
Sector RD
Facility Name ORANGE COUNTY SANITATION DISTRICT
X 3,728.49
Y 413.23
Team A
Description WASTE MANAGEMENT - REFINERY
Device Id
0
Day Stop Time Start Time
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2 24.00 .00
3 24.00 .00
4 24.00 .00
5 24.00 .00
6 24.00 .00
Emittent Id Measure Basis Code Amount
NOX R1DY 184.08
NOX R1HR 7.67
NOX R2 7.67
NOX R2DY 184.08
NOX R2HR 7.67
NOX RACT 187.00
In Process
Approved
EQ Bcat 056057
Description I C E (>500 HP) NAT & DIGESTER GAS
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Start
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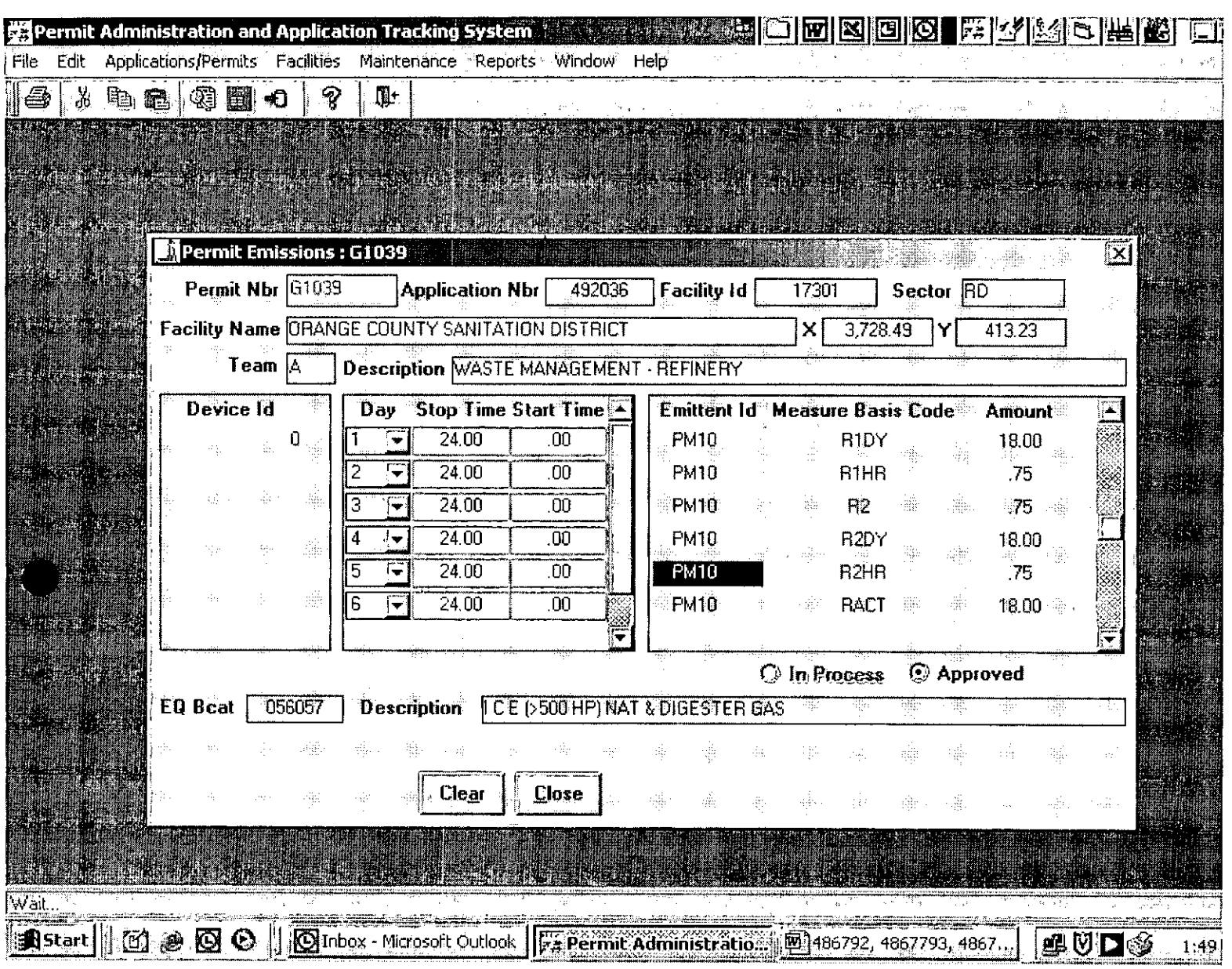
Permit Administration...
486792, 4867793, 48676...
1:49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File Edit Applications/Permits Facilities Maintenance Reports Window Help
Permit Emissions : G1039
Permit Nbr G1039
Application Nbr 492036
Facility Id 17301
Sector RD
Facility Name ORANGE COUNTY SANITATION DISTRICT
X 3,728.49
Y 413.23
Team A
Description WASTE MANAGEMENT - REFINERY
Device Id
0
Day Stop Time Start Time
1 24.00 .00
2 24.00 .00
3 24.00 .00
4 24.00 .00
5 24.00 .00
6 24.00 .00
Emittent Id Measure Basis Code Amount
PM10 R1DY 18.00
PM10 R1HR .75
PM10 R2 .75
PM10 R2DY 18.00
PM10 R2HR .75
PM10 RACT 18.00
In Process
Approved
EQ Bcat 056057
Description I C E (>500 HP) NAT & DIGESTER GAS
Clear
Close
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Inbox - Microsoft Outlook
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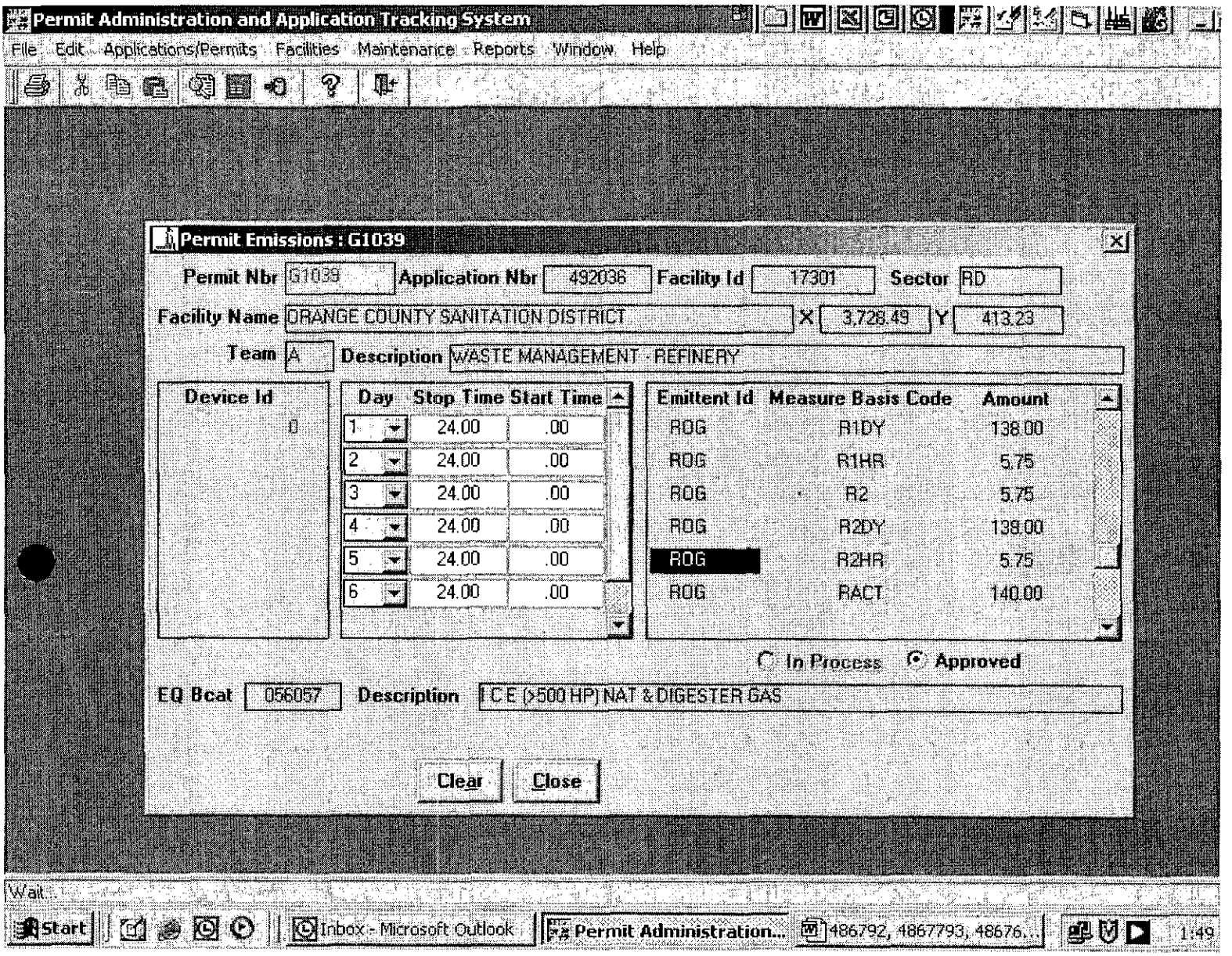
1:49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Permit Nbr G1039
Application Nbr 492036
Facility Id 17301
Sector RD
Facility Name ORANGE COUNTY SANITATION DISTRICT
X 3,728.49
Y 413.23
Team A
Description WASTE MANAGEMENT - REFINERY
Device Id
0
Day Stop Time Start Time
1 24.00 .00
2 24.00 .00
3 24.00 .00
4 24.00 .00
5 24.00 .00
6 24.00 .00
Emittent Id Measure Basis Code Amount
ROG R1DY 138.00
ROG R1HR 5.75
ROG R2 5.75
ROG R2DY 138.00
ROG R2HR 5.75
ROG RACT 140.00
In Process
Approved
EQ Bcat 056057
Description C E (>500 HP) NAT & DIGESTER GAS
Clear
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Wait
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Inbox - Microsoft Outlook
Permit Administration...
486792, 4867793, 48676...
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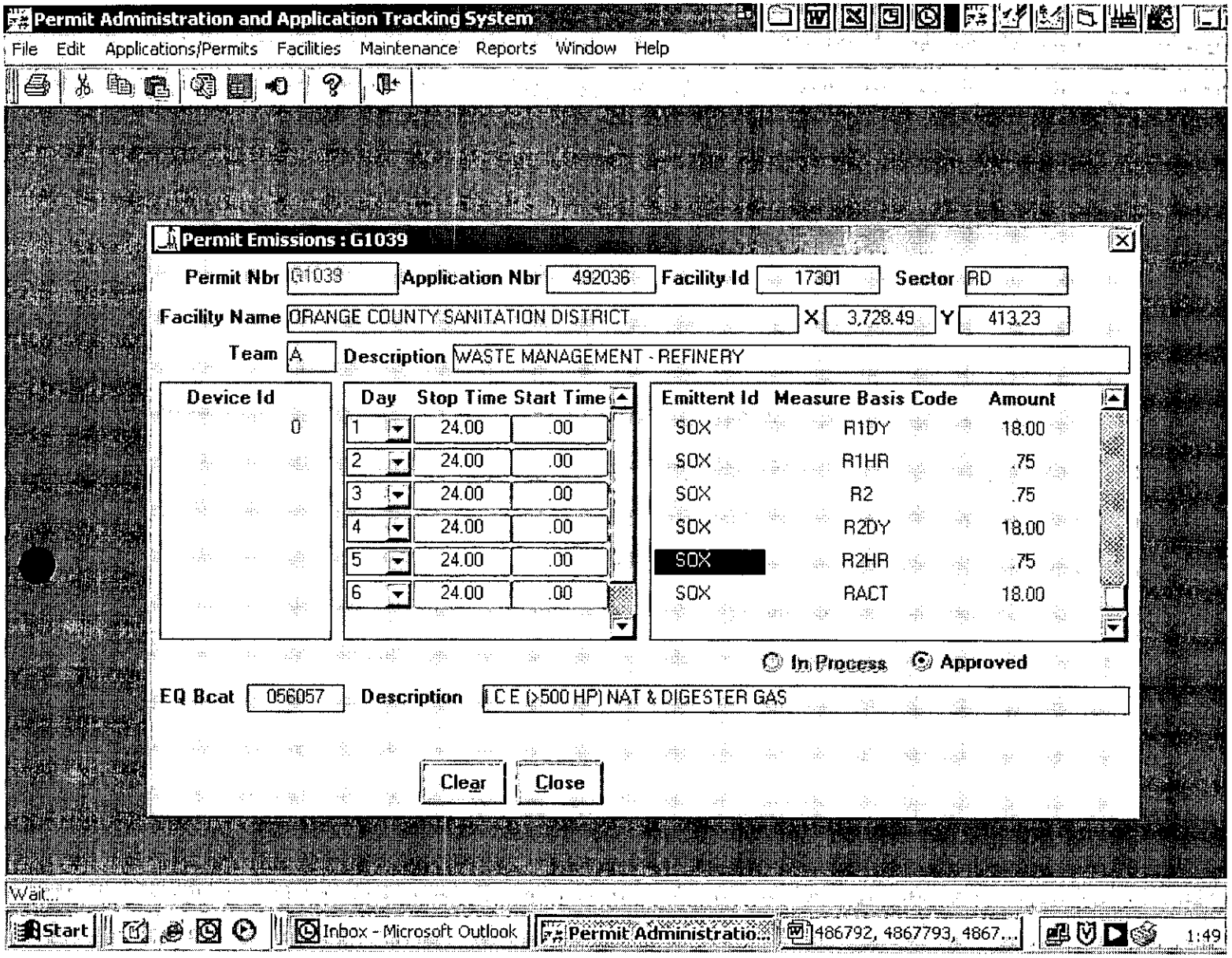
Permit Administration and Application Tracking System
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Permit Emissions : G1039
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Team A
Description WASTE MANAGEMENT - REFINERY
Device Id
0
Day Stop Time Start Time
1 24.00 .00
2 24.00 .00
3 24.00 .00
4 24.00 .00
5 24.00 .00
6 24.00 .00
Emittent Id Measure Basis Code Amount
SOX R1DY 18.00
SOX R1HR .75
SOX R2 .75
SOX R2DY 18.00
SOX R2HR .75
SOX RACT 18.00
In Process
Approved
EQ Bcat 056057
Description I C E (>500 HP) NAT & DIGESTER GAS
Clear
Close
Wait...
Start
Inbox - Microsoft Outlook
Permit Administratio...
486792, 4867793, 4867...
1:49

Gaurang Rawal

From: Kogan, Vlad
Sent: Thursday, July 31, 2008 3:33 PM
To: Charles Tupac
Cc: 'ADejbahsh@aqmd.gov'; Gaurang Rawal
Subject: Engines Source testing. *Facilities* ID 017301 abd 029110.

Dear Mr. Tupac,

Enclosed please find the results of source testing of the Orange County Sanitation District (OCSD) Central Power Generator Systems (CGS) Internal Combustion Engines (ICE). Plant No.1 (ID No. 017301) is located in Fountain Valley CA and operates three ICE (A/N 414648, 414649, 414651). Plant No. 2 is located in Huntington Beach, CA (ID No. 029110) and operates five ICE (A/N 414653 to 414657). The testing was conducted in accordance with the requirements of paragraph (f)(1)(C) SCAQMD Rule 1110.2. Full source testing reports are located in this office and will be submitted to you upon request. Please note that that the enclosed source testing was not conducted to comply with the requirements of permits to operate for the engines. The results of the compliance source testing will be submitted to you separately.

Enclosed also are the results of testing and calculation of the Efficiency Correction Factors (ECF) for these engines. The determination of the ECFs is required by the paragraph (d)(1)(C) of the Rule 1110.2. The applications for incorporation of the ECFs in the permit conditions together with the applicable fees were submitted to SCAQMD on March 30, 2008 (Plant 2) and on July 30, 2008 (Plant 1).

If you have questions or further information is required please contact me at 714-593-7085 (vkogan@OCSD.com).

Regards,

VK

TABLE 1.1
SUMMARY OF RESULTS SCAQMD RULE 1110.2 PTC 17 & 8760 HOUR TEST
OCSD PLANT 1 FV (ID 17301).
ENGINE#1
June 17, 2008

Parameter	Units	High Load	Medium Load	Low Load	Average
NO_X	ppmvd	36.9	35.4	34.8	35.7
	ppmvd @ 15% O_2	24.9	23.0	22.6	23.5
	lb/hr	2.53	2.01	1.81	2.12
	lb/day	60.8	48.3	43.3	50.8
CO	ppmvd	633.1	593.1	595.1	607.1
	ppmvd @ 15% O_2	426.9	385.5	385.6	399.3
	lb/hr	26.40	20.6	18.78	21.91
	lb/day	633.6	493.4	450.8	525.9
TGNMEO [1]	ppmvd	-	69.6	-	69.6
	ppmvd @ 15% O_2	-	45.5	-	45.5
	lb/hr	-	1.04	-	1.04
	lb/day	-	24.9	-	24.9
O_2	%	12.15	11.82	11.80	11.92
CO_2	%	7.52	7.76	7.70	7.66
Measured Q_a	BTU/BHP-HR	7,214	7,358	7,438	7,336.5
ECF	-	1.282	1.257	1.244	1.261
Load	KW	2,353.0	1,989.5	1,796.0	2,046.2
	%	94.1	79.6	71.8	81.8
Volume Flow Rate	DSCFM	9,407	7,819	7,122	8,116

[1] One Method 25.3 Tray (duplicate samples) was collected at average load. Due to data scatter results are from fraction 1A.

OCSD Performance Test
Manual Data Recording

Date	6/17/08					
LSVB12 Unit	1					
Start Time	11:25	12:55	14:46	15:35	16:15	Average
Generator Data						
	1	2	3	4	5	
Amps A:	121	120	142	99	110	
Amps B:	116	116	137	94	104	
Amps C:	118	119	140	98	106	
Voltage (KV):	12.0	12.0	12.1	12.1	12.1	
Power Factor:	0.80	0.80	0.80	0.80	0.80	
Factory Generator Efficiency (%):	96.51	96.51	96.61	96.18	96.34	**96.43**
Net Electrical Power Output (P_{ne} KW):	1987	1992	2353	N/A	1796	**2032**
t Mechanical Power Output (P_{me} BHP):	2761	2766	3266	N/A	2495	**2822**
Fuel Flow Meter Data						
DI-GAS Fuel Flow (SCFM):	565	567	661	476	514	
NAT-GAS Fuel Flow (SCFM):	20	20	20	20	20	
Calc. BSFC(BTU/BHP.Hr), q_a:	**7354**	**7361**	**7214**	**N/A**	**7438**	**7342**
Calc. BSFC(BTU/KW.Hr):	**10215**	**10224**	**10009**	**N/A**	**10335**	**10196**
Emissions Data						
RM NOx:	35.0	36.5	37.8	39.3	39.0	
RM O2:	11.6%	11.6%	12.0%	10.7%	11.5%	
Calc. RM NOx @15%O2:	24.4	24.4	24.4	24.4	24.4	**24.4**
RM CO (ppm):	552	552	552	552	552	
RM CO2 (%):	7.64	7.69	7.45	8.34	7.78	
NOx (lbm/Hr):	1.96	2.04	2.55	1.70	1.96	**2.04**
CO (lbm/Hr):	19.80	19.87	25.81	13.28	16.83	**19.12**
BSNOx (g/BHP.Hr):	0.32	0.33	0.35	N/A	0.36	**0.34**
BSCO (g/BHP.Hr):	3.25	3.26	3.59	N/A	3.06	**3.29**
BSNOx (g/KW.Hr):	**0.45**	**0.46**	**0.49**	**N/A**	**0.49**	**0.47**
BSCO (g/KW.Hr):	**4.52**	**4.53**	**4.98**	**N/A**	**4.25**	**4.57**
Engine Data						
Speed (RPM):	400	400	400	400	400	
AMP ("Hg):	14.5	14.6	22.3	7.3	11.3	
AMT (F):	94.3	94.6	97.0	93.6	95.0	
Load (%):	80%	80%	95%	65%	70%	
Turbo Speed (RPM):	9800	9934	11770	7240	8820	
Jacket Water Temp. IN (F):	167	167	167	168	166	
Jacket Water Temp. OUT (F):	175	175	175	175	174	
Ambient Temp. (F):	77	73	79	74	76	
Barometric pressure ("Hg):	29.98	29.97	29.99	29.95	29.90	
Relative Humidity (%):	79%	84%	84%	75%	75%	
Turbo Air Inlet Temp. (F):	78.7	79	79.3	79.7	80.4	

AUTO-RECORDING SUMMARY
OCSD Standard Form

Plant	1					
Engine	1					
Date	6/17/08					
Time	11:25	12:55	14:46	15:35	16:15	Average
Engine Data						
SPEED (rpm):	400.0	400.0	400.0	399.9	400.0	
Torque (%):	79.1%	79.0%	93.9%	63.6%	70.8%	
Output (bhp):	**2744**	**2742**	**3260**	**2208**	**2458**	**2682**
AMP ("Hg):	14.5	14.6	22.3	7.3	11.3	
PGP (PSI):	22.9	23.0	29.5	17.0	20.5	
PDP (PSI):	15.8	15.8	18.6	13.4	15.0	
AMT (deg F):	94.3	94.6	97.0	93.6	95.0	
IT (deg BTDC):	11.8	11.8	11.8	11.7	11.8	
Engine Performance						
NG Fuel Flow (SCFM):	20	20	20	20.6	20	**20**
DG Fuel Flow (SCFM):	563	566	659	468	518	**555**
LHV Blend Ratio:	95%	95%	95%	93%	94%	
BSFC (BTU/BHP-HR):	**7377**	**7415**	**7214**	**7725**	**7619**	**7470**
NOx MASS FLOW (lbm/HR):	2.02	2.01	2.53	1.57	1.83	**1.99**
CO MASS FLOW (lbm/HR):	20.6	20.5	26.4	14.1	19.0	**20.1**
BS NOx (g/BHP-HR):	0.334	0.332	0.352	0.322	0.337	**0.34**
BS CO (g/BHP-HR):	3.41	3.39	3.68	2.89	3.51	**3.38**
Emissions Data						
RM NOx (ppm):	35.3	35.4	37.0	35.7	34.8	
RM O2 (%):	11.9%	11.8%	12.2%	11.0%	11.8%	
RM NOx @15%O2:	23.4	23.4	23.4	23.4	23.4	**23.4**
RM CO (ppm):	593	593	633	526	595	
RM CO @15%O2	388	383	427	314	386	**380**
Combustion Data						
Engine Avg PP (psi):	764	768	903	624	701	
Engine Avg LOPP (deg ATDC):	7.7	7.8	7.4	8.5	7.6	
Engine Avg Std Dev. PP(psi):	28	28	31	29	26	
Engine Exhaust Temp.(F):	845	844	825	898	854	

TABLE 1.2
SUMMARY OF RESULTS SCAQMD RULE 1110.2 PTC 17 & 8760 HOUR TEST
OCSD PLANT 1
ENGINE #2
July 9, 2008

Parameter	Units	High Load	Medium Load	Low Load	Average
NO_X	ppmvd	39.6	35.4	32.3	35.8
	ppmvd @ 15% O_2	26.9	24.1	21.8	24.3
	lb/hr	3.07	2.57	2.04	2.56
	lb/day	73.7	61.8	49.0	61.5
CO	ppmvd	671.0	687.7	703.5	687.4
	ppmvd @ 15% O_2	455.2	468.4	474.4	466.0
	lb/hr	31.65	30.46	27.06	29.72
	lb/day	759.6	731.1	649.5	713.4
TGNMEO [1]	ppmvd	-	168.5	-	168.5
	ppmvd @ 15% O_2	-	114.8	-	114.8
	lb/hr	-	3.20	-	3.20
	lb/day	-	76.8	-	76.8
O_2	%	12.20	12.24	12.15	12.20
CO_2	%	7.41	7.43	7.52	7.45
Measured Q_a	BTU/BHP-HR	7,283	7,511	7,779	7,524.3
ECF	-	1.270	1.232	1.189	1.230
Load	KW	2,364.0	2,127.0	1,775.0	2,088.7
	%	94.6	85.1	71.0	83.5
Volume Flow Rate	DSCFM	10,642	9,994	8,678	9,771

[1] One Method 25.1 Tray (duplicate samples) was collected at average load. Results are the average of both samples.

OCSD Performance Test
Manual Data Recording

Date	7/9/08			
LSVB12 Unit	2			
Start Time	7:16	8:15	9:14	
Generator Data				
	1	2	3	Average
Amps A:	107	141	129	
Amps B:	105	138	127	
Amps C:	104	139	127	
Voltage (KV):	12	12	12	
Power Factor:	0.80	0.80	0.80	
Factory Generator Efficiency (%):	96.35	96.60	96.53	**96.49**
Power Output (KW):	1775	2364	2127	**2089**
Power Output (BHP):	2470	3280	2954	**2901**
Fuel Flow Meter Data				
DI-GAS Fuel Flow (SCFM):	536	675	625	
NAT-GAS Fuel Flow (SCFM):	68	69	69	
Calc. BSFC(BTU/BHP.Hr):	**7779**	**7283**	**7511**	**7525**
Calc. BSFC(BTU/KW.Hr):	**10823**	**10106**	**10431**	**10453**
Emissions Data				
RM NOx:	31.8	39.4	35.3	**35.5**
RM O2:	12.2%	12.3%	12.2%	
Calc. RM NOx @15%O2:	21.5	26.9	24.0	**24.14**
RM CO (ppm):	710	667	672	
RM CO2 (%):	710	667	672	
NOx (lbm/Hr):	2.02	3.08	2.57	**2.56**
CO (lbm/Hr):	27.4	31.7	29.8	**29.6**
BSNOx (g/BHP.Hr):	0.33	0.39	0.35	**0.36**
BSCO (g/BHP.Hr):	4.46	3.97	4.10	**4.18**
BSNOx (g/KW.Hr):	**0.52**	**0.59**	**0.55**	**0.55**
BSCO (g/KW.Hr):	**7.01**	**6.09**	**6.35**	**6.48**
Engine Data				
Speed (RPM):	400	400	400	
AMP ("Hg):	14.6	25.7	20.8	
AMT (F):	158.3	160.3	159.3	
Load (%):	70%	95%	83%	
Turbo Speed (RPM):	9959	8199	11331	
Jacket Water Temp. IN (F):	158	160	159	
Jacket Water Temp. OUT (F):	166	168	167	
Ambient Temp. (F):	63.8	64.1	65.2	
Barometric pressure ("Hg):	30.06	30.06	30.06	
Relative Humidity (%):	80%	80%	80%	
Turbo Air Inlet Temp. (F):	77	76	76	

AUTO-RECORDING SUMMARY
OCSD Standard Form

Plant	1		
Engine	2		
Date	7/9/08	7/9/08	7/9/08
Time	7:16	8:15	9:14

Engine Data				Average
SPEED (rpm):	400.0	400.0	400.0	
Torque (%):	68%	93%	83%	
Output (bhp):	2367	3222	2876	**2821**
AMP ("Hg):	14.5	25.3	20.9	
PGP (PSI):	19.5	28.8	25.1	
PDP (PSI):	12.4	16.3	14.9	
AMT (deg F):	96.8	100.7	99.4	
IT (deg BTDC):	11.8	11.8	11.8	
Engine Performance				
NG Fuel Flow (SCFM):	20.0	20.1	20.0	**20**
DG Fuel Flow (SCFM):	537	672	624	**611**
LHV Blend Ratio:	94%	95%	95%	
BSFC (BTU/BHP-HR):	**8125**	**7389**	**7712**	**7742**
NOx MASS FLOW (lbm/HR):	1.81	2.77	2.31	**2.30**
CO MASS FLOW (lbm/HR):	24.0	28.5	27.4	**26.6**
BS NOx (g/BHP-HR):	0.347	0.390	0.365	**0.37**
BS CO (g/BHP-HR):	4.6	4.0	4.3	**4.31**
Emissions Data				
RM NOx (ppm):	32.3	39.6	35.4	
RM O2 (%):	12.2%	12.2%	12.2%	
RM NOx @15%O2:	21.8	26.9	24.1	**24.3**
RM CO (ppm):	704	671	688	
RM CO @15%O2	474	455	469	**466**
Combustion Data				
Engine Avg PP (psi):	725	940	844	
Engine Avg LOPP (deg. ATDC):	5.7	6.2	5.7	
Engine Avg Std Dev. PP(psi):	27	29	28	
Engine Exhaust Temp.(F):	802	808	806	

TABLE 1.3
SUMMARY OF RESULTS SCAQMD RULE 1110.2 PTC 17 & 8760 HOUR TEST
OCSD PLANT 1
ENGINE #3
July 8, 2008

Parameter	Units	High Load	Medium Load	Low Load	Average
NO_X	ppmvd	64.6	54.5	56.7	58.6
	ppmvd @ 15% O_2	41.5	35.8	35.6	37.6
	lb/hr	4.27	3.40	2.91	3.52
	lb/day	102.4	81.5	69.7	84.6
CO	ppmvd	593.1	619.0	587.7	599.9
	ppmvd @ 15% O_2	381.0	407.4	369.4	385.9
	lb/hr	23.86	23.49	18.34	21.90
	lb/day	572.7	563.8	440.1	525.5
TGNMEO [1]	ppmvd	-	155.5	-	155.5
	ppmvd @ 15% O_2	-	102.4	-	102.4
	lb/hr	-	2.53	-	2.53
	lb/day	-	60.7	-	60.7
O_2	%	11.71	11.94	11.51	11.72
CO_2	%	7.76	7.64	8.07	7.82
Measured Q_a	BTU/BHP-HR	7,097	7,337	7,636	7,356.7
ECF	-	1.303	1.261	1.211	1.258
Load	KW	2,423.0	2,156.0	1,780.0	2,119.7
	%	96.9	86.2	71.2	84.8
Volume Flow Rate	DSCFM	9,076	8,562	7,039	8,226

[1] One Method 25.1 Tray (duplicate samples) was collected at average load. Results are the average of both samples.

OCSD Performance Test
Manual Data Recording

Date 7/8/08
LSVB12 Unit 3
Start Time 11:07 13:34 15:17

Generator Data

	1	3	4	Average
Amps A:	108	130	144	
Amps B:	105	128	141	
Amps C:	105	126	141	
Voltage (KV):	12.1	12.1	12.2	
Power Factor:	0.8	0.8	0.8	
Factory Generator Efficiency (%):	96.34	96.55	96.61	**96.50**
Power Output (KW):	1780	2156	2423	**2119**
Power Output (BHP):	2476	2993	3361	**2944**

Fuel Flow Meter Data

DI-GAS Fuel Flow (SCFM):	524	613	665	
NAT-GAS Fuel Flow (SCFM):	20	20.333	22.667	
Calc. BSFC(BTU/BHP.Hr), q_a:	**7636**	**7337**	**7097**	**7356**
Calc. BSFC(BTU/KW.Hr):	**10625**	**10186**	**9847**	**10219**

Emissions Data

RM NOx:	54.7	54.0	64.5	**57.7**
RM O2:	11.5%	11.9%	11.7%	
Calc. RM NOx @15%O2:	34.2	35.3	41.3	**36.94**
RM CO (ppm):	578	610	590	
RM CO2 (%):	7.93	7.63	7.74	
NOx (lbm/Hr):	2.79	3.35	4.26	**3.47**
CO (lbm/Hr):	17.94	23.06	23.75	**21.6**
BSNOx (g/BHP.Hr):	0.52	0.51	0.57	**0.53**
BSCO (g/BHP.Hr):	3.32	3.50	3.19	**3.33**
BSNOx (g/KW.Hr):	**0.71**	**0.71**	**0.80**	**0.74**
BSCO (g/KW.Hr):	**4.57**	**4.85**	**4.45**	**4.62**

Engine Data

Speed (RPM):	400	400	400	
AMP ("Hg):	12.5	20.4	24.2	
AMT (F):	100.0	104.3	106.0	
Load (%):	70%	84%	95%	
Turbo Speed (RPM):	9039	11091	11912	
Jacket Water Temp. IN (F):	166	169	170	
Jacket Water Temp. OUT (F):	170	173	174	
Ambient Temp. (F):	68	68	68	
Barometric pressure ("Hg):	30.3	30.1	30.1	
Relative Humidity (%):	77%	77%	77%	
Turbo Air Inlet Temp. (F):	77	77	77	

AUTO-RECORDING SUMMARY
OCSD Standard Form

Plant	1		
Engine	3		
Date	7/8/08	7/8/08	7/8/08
Time	11:07	13:34	15:17

Engine Data				**Average**
SPEED (rpm):	400	400	400	
Torque (%):	69.9%	85.4%	95.3%	
Output (bhp):	2425	2965	3308	**2899**
AMP ("Hg):	12.4	20.4	23.9	
PGP (PSI):	21.1	28.6	31.8	
PDP (PSI):	15.0	18.6	20.0	
AMT (deg F):	101.2	105.6	107.4	
IT (deg BTDC):	11.8	11.7	11.8	
Engine Performance				
NG Fuel Flow (SCFM):	20	27	22	**23**
DG Fuel Flow (SCFM):	520	602	664	**595**
LHV Blend Ratio:	94%	93%	95%	
BSFC (BTU/BHP-HR):	7741	7404	7180	**7442**
NOx MASS FLOW (lbm/HR):	2.89	3.40	4.26	**3.52**
CO MASS FLOW (lbm/HR):	18.2	23.5	23.8	**21.8**
BS NOx (g/BHP-HR):	0.54	0.52	0.58	**0.55**
BS CO (g/BHP-HR):	3.41	3.60	3.26	**3.42**
Emissions Data				
RM NOx (ppm):	56.7	54.5	64.6	
RM O2 (%):	11.5%	11.9%	11.7%	
RM NOx @15%O2:	35.6	35.9	41.5	**37.7**
RM CO (ppm):	588	619	593	
RM CO @15%O2	369	408	381	**386**
Combustion Data				
Engine Avg PP (psi):	1840	1845	1861	
Engine Avg LOPP (deg. ATDC):	7.9	7.9	8.2	
Engine Avg Std Dev. PP(psi):	23	27	31	
Engine Exhaust Temp.(F):	874	855	875	

CONCENTRATION LIMITS EFFECTIVE JULY 1, 2011		
NO_x (ppmvd)[1]	VOC (ppmvd)[2]	CO (ppmvd)[1]
11	30	250

[1] Parts per million by volume, corrected to 15% oxygen on a dry basis and averaged over 15 minutes.

[2] Parts per million by volume, measured as carbon, corrected to 15% oxygen on a dry basis and averaged over the sampling time required by the test method.

The concentration limits effective on and after July 1, 2010 shall not apply to engines that operate less than 500 hours per year or use less than 1 x 10^9 British Thermal Units (Btus) per year (higher heating value) of fuel.

If the operator of a two-stroke engine equipped with an oxidation catalyst and insulated exhaust ducts and catalyst housing demonstrates that the CO and VOC limits effective on and after July 1, 2010 are not achievable, then the Executive Officer may, with United States Environmental Protection Agency (EPA) approval, establish technologically achievable, case-by-case CO and VOC limits in place of the concentration limits effective on and after July 1, 2010. The case-by-case limits shall not exceed 250 ppmvd VOC and 2000 ppmvd CO.

If the operator of an engine that uses non-pipeline quality natural gas demonstrates that due to the varying heating value of the gas a longer averaging time is necessary, the Executive Officer may establish for the engine a longer averaging time, not to exceed six hours, for any of the concentration limits of Table II. Non-pipeline quality natural gas is a gas that does not meet the gas specifications of the local gas utility and is not supplied to the local gas utility.

(d) (1) (C) Notwithstanding the provisions in subparagraph (d)(1)(B), the operator of any stationary engine fired by landfill or digestor gas (biogas) shall not operate the engine in a manner that exceeds the emission concentration limits of Table III, provided that the facility

monthly average biogas usage by the biogas engines is 90% or more, based on the higher heating value of the fuels used. The calculation of the monthly facility biogas use percentage may exclude natural gas fired during: any electrical outage at the facility; a Stage 2 or higher electrical emergencies called by the California Independent System Operator Corporation; and when a sewage treatment plant activates an Emergency Operations Center or Incident Command System, as part of an emergency response plan, because of either high influent flows caused by precipitation or a disaster.

The concentration limits effective on and after July 1, 2012 shall become effective provided the Executive Officer conducts a technology assessment that confirms that the limits are achievable, and reports to the Governing Board by July 2010, at a regularly scheduled public meeting.

The concentration limits effective on and after July 1, 2012 shall not apply to engines that operate less than 500 hours per year or use less than 1 x 10^9 Btus per year (higher heating value) of fuel.

for ≥ 90% Biogas

TABLE III CONCENTRATION LIMITS FOR LANDFILL AND DIGESTOR GAS-FIRED ENGINES		
NO_x (ppmvd)[1]	VOC (ppmvd)[2]	CO (ppmvd)[1]
bhp ≥ 500: 36 x ECF[3] bhp < 500: 45 x ECF[3]	Landfill Gas: 40 Digestor Gas: 250 x ECF[3]	2000
CONCENTRATION LIMITS EFFECTIVE JULY 1, 2012		
NO_x (ppmvd)[1]	VOC (ppmvd)[2]	CO (ppmvd)[1]
11	30	250

1 Parts per million by volume, corrected to 15% oxygen on a dry basis and averaged over 15 minutes.

2 Parts per million by volume, measured as carbon, corrected to 15% oxygen on a dry basis and averaged over the sampling time required by the test method.

3 ECF is the efficiency correction factor.

The ECF shall be 1.0 unless:

(i) The engine operator has measured the engine's net specific energy consumption (q_a), in compliance with ASME Performance Test Code PTC 17 -1973, at the average load of the engine; and

(ii) The ECF-corrected emission limit is made a condition of the engine's permit to operate.

The ECF is as follows:

$$ECF = \frac{9250 \text{ Btus/hp-hr}}{\text{Measured } q_a \text{ in Btus/hp-hr}}$$

Measured q_a shall be based on the lower heating value of the fuel. ECF shall not be less than 1.0.

The Executive Officer may approve the burning of more than 10% natural gas in a landfill or digestor gas-fired engine, when it is necessary, if: the only alternative to limiting natural gas to 10% would be shutting down the engine and flaring more landfill or digestor gas; or the engine requires more natural gas in order for a waste heat recovery boiler to provide enough thermal energy to operate a sewage treatment plant, and other boilers at the facility are unable to provide the necessary thermal energy.

Once an engine complies with concentration limits effective on and after July 1, 2012, there shall be no limit on the percentage of natural gas burned.

(D) The operator of any new engine subject to subparagraph (e)(1)(B) shall:

(i) Comply with the requirements of Best Available Control Technology in accordance with Regulation XIII if the engine requires a District permit; or

(ii) Not operate the engine in a manner that exceeds the emission concentration limits in Table I if the engine does not require a District permit.

(E) By February 1, 2009, the operator of a spark-ignited engine without a Rule 218-approved continuous emission monitoring system (CEMS) or a Regulation XX (RECLAIM)-approved CEMS shall equip and maintain the engine with an air-to-fuel ratio controller

FACILITY PERMIT TO OPERATE
ORANGE COUNTY SANITATION DISTRICT

Current PO

PERMIT TO OPERATE

Permit No. G1039
A/N 492036

Equipment Description:

RESOURCE RECOVERY SYSTEM NO. 1 CONSISTING OF:

INTERNAL COMBUSTION ENGINE (CG1-FV), COOPER BESSMER, SPARK IGNITION, FOUR STROKE, WITH A MODIFIED TURBOCHARGED-INTERCOOLED V-12 TYPE, MODEL NO. LSVB-12-SGC, 3471HP, NATURAL GAS AND/OR DIGESTER GAS FIRED, DRIVING A 2500 KW ELECTRIC GENERATOR, WITH AN EXHAUST HEAT RECOVERY STEAM GENERATOR, 5,008,500 BTU/HR CAPACITY, UNFIRED.

Conditions:

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
   [RULE 204]

2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
   [RULE 204]

3. THIS EQUIPMENT SHALL BE OPERATED BY PERSONNEL PROPERLY TRAINED IN ITS OPERATION.
   [RULE 204]

4. THIS ENGINE SHALL HAVE AN OPERATIONAL NON-RESETTABLE TOTALIZING TIME METER TO DETERMINE THE ENGINE ELAPSED OPERATING TIME FOR EACH FUEL BLEND BURNED.
   [RULE 1110.2]

5. A FLOW INDICATING AND RECORDING DEVICE SHALL BE INSTALLED IN THE FUEL GAS, OR FUEL BLEND, SUPPLY LINE TO THE ENGINE TO MEASURE AND RECORD THE QUANTITY OF EACH FUEL GAS (IN SCFM) BURNED.
   [RULE 204]

6. SAMPLING PORT SHALL BE INSTALLED FOR THE INLET GAS LINE TO THE ENGINE TO ALLOW THE COLLECTION OF A FUEL GAS OR FUEL BLEND SAMPLES.
   [RULE 204]

7. MONTHLY READINGS OF THE BTU CONTENT OF FUEL GAS (BTU/SCF) AT THE COMBINED INLET TO THE CGS ENGINES SHALL BE TAKEN USING AN INSTRUMENT APPROVED BY THE SCAQMD. ALL RESULTS SHALL BE RECORDED.
   [RULE 204]

8. ALL RECORDING DEVICES SHALL BE SYNCHRONIZED WITH RESPECT TO THE TIME OF THE DAY.
   [RULE 204]

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ORANGE COUNTY SANITATION DISTRICT

9. THE TOTAL HEAT INPUT OF GASEOUS FUEL, OR FUEL BLEND, BURNED IN THIS ENGINE SHALL NOT EXCEED 28.5 MM BTU PER HOUR. A LOG SHALL BE KEPT INDICATING THE TOTAL HEATING VALUE OF FUEL GAS, OR FUEL BLEND, BURNED IN THIS ENGINE BASED ON THE RECORDED FLOW RATE (SCFM) AND THE LATEST MONTHLY BTU CONTENT READING.
[RULE 1303 (b) (1) AND 1303 (b) (2)-MODELING AND EMISSIONS OFFSET]

10. THIS EQUIPMENT SHALL BE OPERATED IN COMPLIANCE WITH RULES 218, 431.1 AND 1110.2.
[RULE 218, 431.1 AND 1110.2]

11. THIS EQUIPMENT SHALL BE OPERATED IN SUCH A MANNER THAT THE FOLLOWING EMISSION RATES ARE NOT EXCEEDED.

AIR CONTAMINANT	
CARBON MONOXIDE	590 PPMV AT 15% O2
PARTICULATES (PM10)	0.0087 GRAINS/ DSCF
ROG OR TNMHC (AS CARBON)	209 PPMV AT 15% O2

[RULE 1303 (a) (1), 1303(b) (1) AND 1303 (b) (2)-BACT, MODELING AND EMISSIONS OFFSET]

12. THE COMBINED EMISSIONS FROM THE THREE (3) CGS ENGINES, USING CALENDAR MONTHLY EMISSIONS DIVIDED BY 30, SHALL NOT EXCEED THE FOLLOWING:

AIR CONTAMINANT	LBS/DAY
CARBON MONOXIDE	1321
NITROGEN OXIDES (AS NO2)	368
PARTICULATES (PM10)	36
ROG OR TNMHC (AS CH4)	276
SULFUR DIOXIDE	36

[RULE 1303 (b) (2)-EMISSIONS OFFSET]

13. THE OPERATOR SHALL INSTALL AND MAINTAIN A CONTINUOUS EMISSION MONITORING SYSTEM (CEMS), OR AN ALTERNATIVE SYSTEM, AS APPROVED BY THE EXECUTIVE OFFICER, TO MEASURE THE ENGINE EXHAUST FOR NOx AND O2 CONCENTRATIONS ON A DRY BASIS, EXCEPT DURING SHUTDOWN FOR MAINTENANCE OF THE SYSTEM. IN ADDITION, THE CEMS SHALL CONVERT THE ACTUAL Nox TO MASS EMISSION RATES; AND RECORD THE ACTUAL AND CORRECTED ENGINE Nox CONCENTRATION AT 15% O2 AND MASS EMISSION RATES ON AN HOURLY AND DAILY BASIS.
[RULE 218, RULE 1110.2]

14. THE OPERATOR SHALL CONDUCT PERFORMANCE TESTS ANNUALLY. WRITTEN NOTICE OF THE PERFORMANCE TEST SHALL BE PROVIDED TO THE AQMD AT LEAST 7 DAYS PRIOR TO THE TEST SO THAT AN OBSERVER MAY BE PRESENT. A COMPLETE FINAL REPORT OF THE TEST (LBS/HR, PPMVD AT 15% O2, LBS/MMBTU, ETC.) SHALL BE PROVIDED TO THE AQMD WITHIN 45 DAYS AFTER TESTING. ALL TEST RUNS REQUIRED BY AQMD SHALL BE REPORTED. THE TESTS SHALL INCLUDE BUT NOT BE LIMITED TO, A TEST OF THE FUELS BURNED AND ENGINE EXHAUST FOR:

A. TOTAL NON-METHANE HYDROCARBONS
B. CARBON MONOXIDE (EXHAUST ONLY)
C. TOTAL PARTICULATE MATTER (EXHAUST ONLY).

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D. OXIDES OF NITROGEN (EXHAUST ONLY).
E. OXYGEN
F. FLOW RATE
G. MOISTURE
H. TOXIC AIR CONTAMINANTS, FOR ONE ENGINE PER YEAR
I. ALDEHYDES (EXHAUST ONLY), FOR ONE ENGINE PER YEAR
J. TOTAL REDUCED SULFUR COMPOUNDS (INLET)
K. NITROGEN AND CARBON DIOXIDE
L. BTU CONTENTS (INLET)
M. POWER OUTPUT

[RULE 1303(b) (1) AND 1303(b) (2) - MODELING AND EMISSION OFFSET], [RULE 1110.2], [RULE 404]

15 RECORDS SHALL BE KEPT AND MAINTAINED TO PROVE COMPLIANCE WITH ALL CONDITIONS FOR THIS PERMIT. THE RECORDS SHALL BE KEPT ON FILE FOR AT LEAST FIVE YEARS AND SHALL BE MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.
[RULE 204]

Emissions And Requirements:

16. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

CO: 2000 PPMV, RULE 1110.2
NOx: 36 PPMV, RULE 1110.2.
ROG: 250 PPMV, RULE 1110.2.
PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 · www.aqmd.gov

December 19, 2008

Mr. James D. Ruth
General Manager
Orange County Sanitation District
PO Box 8127
Fountain Valley, CA 92728-8127

Subject: Title V Facility Permits
Fountain Valley, Plant 1 (Facility ID 017301), and
Huntington Beach, Plant 2 (Facility ID 029110).

Dear Mr. Ruth,

Enclosed please find the final Title V facility permits, for the Orange County Sanitation District (OCSD) Fountain Valley, Sewage Treatment Plant No. 1 (Facility ID 017301), located at 10844 Ellis Avenue, Fountain Valley, California, and Huntington Beach, Sewage Treatment Plant No. 2 (Facility ID 029110), located at 22212 Brookhurst Street, Huntington Beach, California.

The South Coast Air Quality Management District (AQMD) previously issued proposed permits and public notice on October 30, 2008, for Environmental Protection Agency (EPA) and public review and commenting. AQMD received no comments from EPA or public on the proposed permits. Since the proposed permits were released, the following non-significant revisions have been made to the permits:

Plant No. 1 Facility ID 017301
Updated facility's Responsible Official and contact person's names.

Section D: Included Central Generation System equipment permits to operate for A/Ns 492036, 492038 and 492039.

Made corrections and updated permits as deemed necessary.

Section K: This section has been updated with the current federal and non-federal enforceable versions.

Plant No. 2 Facility ID 029110
Updated facility's Responsible Official and contact person's names.

Section D: Made corrections and updated permits as deemed necessary.

As of January 12, 2009, the Title V permits replaces all existing Permits to Operate and Permits to Construct that have been issued by the AQMD to each of the above facilities (ID 017301 and ID 029110).

Please review the attached Title V Facility Permits. The operation of your each facility is bound by the conditions and/or requirements stated in your Facility Permit to Operate. If you determine any administrative errors in your Facility Permits, please contact Mr. Gaurang Rawal, Air Quality Engineer II, at (909) 396-2543 within 30 days of the receipt of your permits.

Sincerely,

Mohsen Nazemi, P.E.
Deputy Executive Officer
Engineering And Compliance

MN: JC: CDT: GCR

Attachments
cc: w/ enclosure
Geraldo Rios, EPA Region IX
Compliance
Title V Central File
Title V Applications (341103 and 332589) Files,
w/o enclosure
Jay Chen, SCAQMD
William Thompson, SCAQMD

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

9/4/2008

TERRY AHN
ORANGE COUNTY SANITATION DISTRICT
P O BOX 8127
FOUNTAIN VALLEY, CA 92728

Facility ID: 17301
Located at: 10844 ELLIS AVE, FOUNTAIN VALLEY

Thank you for filing your application(s) with the South Coast Air Quality Management District (AQMD).

The application number(s) assigned by AQMD to your application package(s) is/are on Page 2 of this letter. Please refer to the information on Page 2 when contacting AQMD for assistance. The information you submitted with your application(s) or in your latest submittal is complete to the extent that allows us to begin processing of your application(s), however some clarifying data may still be needed. The acceptance of your application(s) does not imply that permit(s) has/have been approved. The engineer assigned to process your application(s), as indicated below, may contact you if additional information is required.

If you have any question or need additional information about your application(s), please contact the engineer listed below:

Engineer: Gaurang Rawal **Telephone:** (909) 396 - 2543

For general information about AQMD's permitting process, please call (909) 396-2468.

cc: Application file(s)

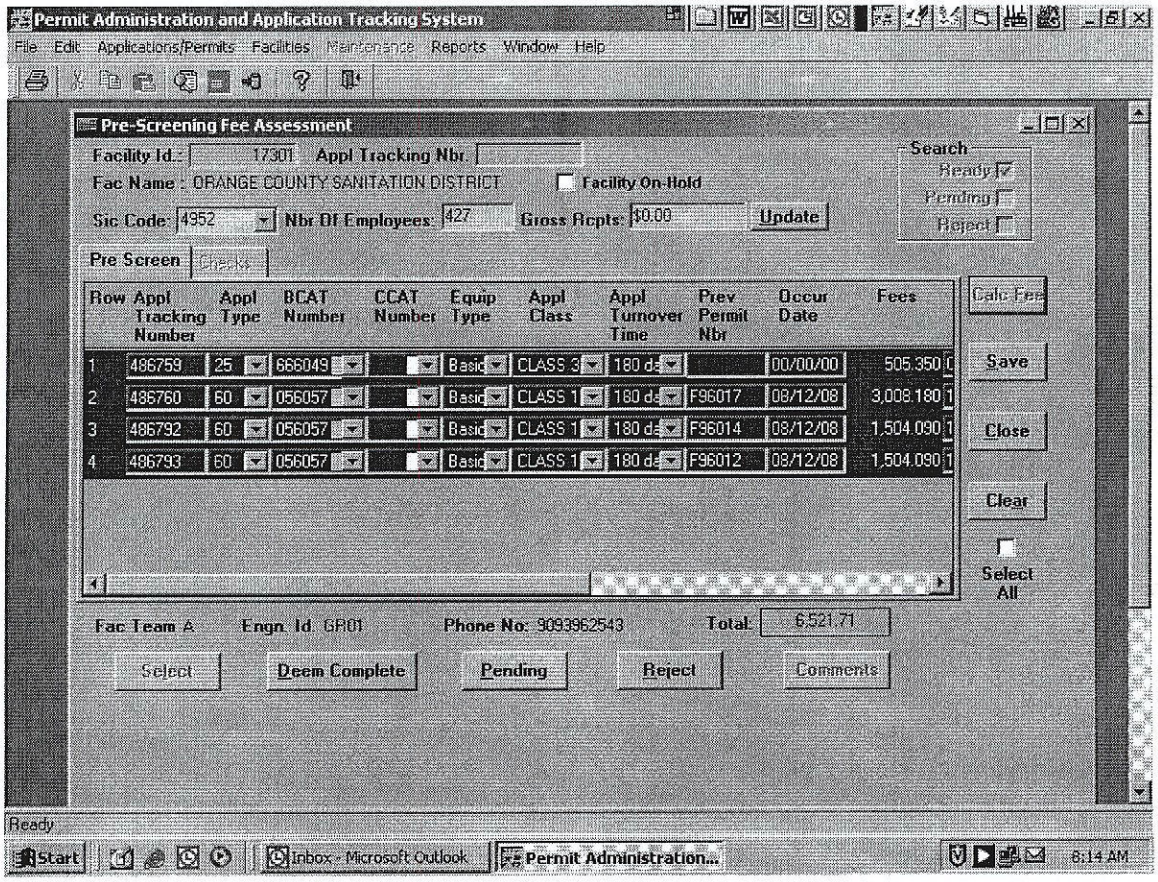
AQMD PERMIT APPLICATION INFORMATION

(Please refer to this information when contacting AQMD for Assistance)

9/4/2008

Facility ID: 17301

Application Number (s)	Equipment Description
486759	PLAN RULE 1110.2- Inspection & Monitoring Plan
486760	I C E (>500 HP) NAT & DIGESTER GAS PREV. F96017/414651
486792	I C E (>500 HP) NAT & DIGESTER GAS " F96014/414650
486793	I C E (>500 HP) NAT & DIGESTER GAS " F96012/414648


Permit Administration and Application Tracking System
File Edit Applications/Permits Facilities Maintenance Reports Window Help
Pre-Screening Fee Assessment
Facility Id.: 17301 Appl Tracking Nbr.
Fac Name : ORANGE COUNTY SANITATION DISTRICT
Facility On-Hold
Sic Code: 4952 Nbr Of Employees: 427 Gross Rcpts: $0.00 Update
Search
Ready
Pending
Reject
Pre Screen Checks
Row Appl Tracking Number Appl Type BCAT Number CCAT Number Equip Type Appl Class Appl Turnover Time Prev Permit Nbr Occur Date Fees
1 486759 25 666049 Basic CLASS 3 180 da 00/00/00 505.350
2 486760 60 056057 Basic CLASS 1 180 da F96017 08/12/08 3,008.180
3 486792 60 056057 Basic CLASS 1 180 da F96014 08/12/08 1,504.090
4 486793 60 056057 Basic CLASS 1 180 da F96012 08/12/08 1,504.090
Calc Fee
Save
Close
Clear
Select All
Fac Team A Engn Id GP01 Phone No: 9093962543 Total: 6,521.71
Select
Deem Complete
Pending
Reject
Comments
Ready
Start
Inbox - Microsoft Outlook
Permit Administration...
8:14 AM

ORANGE COUNTY SANITATION DISTRICT

July 29, 2008

phone:
(714) 962-2411

mailing address:
P.O. Box 8127
Fountain Valley, CA
92728-8127

street address:
10844 Ellis Avenue
Fountain Valley, CA
92708-7018

Permit Services
South Coast Air Quality Management District
21865 E. Copley Drive
Diamond Bar, CA 91765-4182

SUBJECT: Change of Condition for Permits to Operate Central Power Generation System Engines (F96012, F96014, and F96017) at OCSD Plant No. 1

The purpose of this letter is to submit a permit application for the change of conditions for Permits to Operate F96012, F96014, and F96017 for Central Power Generation System Engines at Orange County Sanitation District's (OCSD) Wastewater Treatment located in Fountain Valley, CA.

This application is being submitted in accordance with the SCAQMD Rule 1110.2, subparagraph (e)(2)(B) requirements, which allows engine operators to submit permit modification requests to incorporate efficiency correction factor (ECF)-adjusted emission limits.

OCSD determined the ECF for each engine by measuring the engine's net specific energy consumption, in accordance with ASME Performance Test Code PTC 17-1973 as specified in the SCAQMD Rule 1110.2, subparagraph (d)(1)(C). The preliminary results of the ECF measurements and the ECF-adjusted emission limits are provided in the Attachment 1. The final results of the ECF measurements will be provided shortly.

Also enclosed are:

- (3) SCAQMD Form 400-A's
- (1) SCAQMD Form 400-CEQA
- Check for the permit processing fee in the amount of $6,016.36

If you have any questions or require further information, please contact Vlad Kogan at (714) 593-7085 or vkogan@ocsd.com.

VKogan

Michael D. Moore, Manager
Environmental Compliance and Regulatory Affairs Division
TA:rm
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Enclosure(s)

cc: T. Ahn
Charlie Tupac (SCAQMD)
Gaurang Rawal (SCAQMD)

Attachment 1

Efficiency Correction Factor (ECF) Determination
and ECF-Adjusted Emission Limits

Efficiency Correction Factor (ECF) Determination

OCSD hired the Advanced Engine Technologies Corporation (AETC) to measure the engine's net specific energy consumption (q_a), in accordance with ASME Performance Test Code PTC 17-1973.

Per SCAQMD Rule 1110.2 subparagraph (d)(1)(C), ECF is calculated as follows:

ECF = 9250 Btu/hp-hr/Measured q_a in Btu/hp-hr

ECF-Adjusted Emission Limits

Engine No.	Permit No.	Efficiency Correction Factor (ECF)	Concentration Limits	
			NOx (ppmvd) 36 x ECF	VOC (ppmvd) 250 x ECF
1	F96012	1.261	45.40	315.25
2	F96014	1.230	44.28	307.50
3	F96017	1.258	45.29	314.50